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Mac

ADDICT

37



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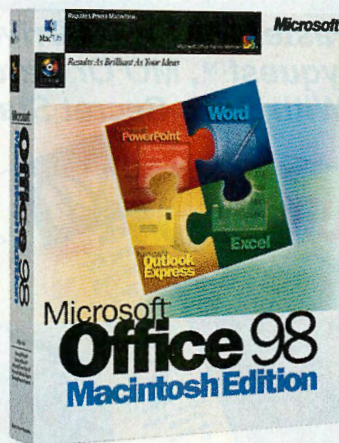
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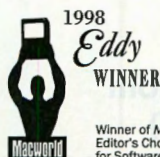
Office 98 is the productivity suite that's right for everyone. With it, you'll zip through tasks, dash through data, and create stunning documents, presentations, and spreadsheets faster than you can say, "fasten your seatbelt."

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Best of all, Office 98 was built from the ground up for the Mac. From the interface, to the icons, to the sophisticated ease of use, even the experts agree we *finally got it right*. Which means with Office 98 you can make good on all the reasons you bought that powerful new iMac in the first place. To really go places. Faster and more easily than ever before.

Microsoft Office 98 Macintosh Edition. **Prepare for take-off.**

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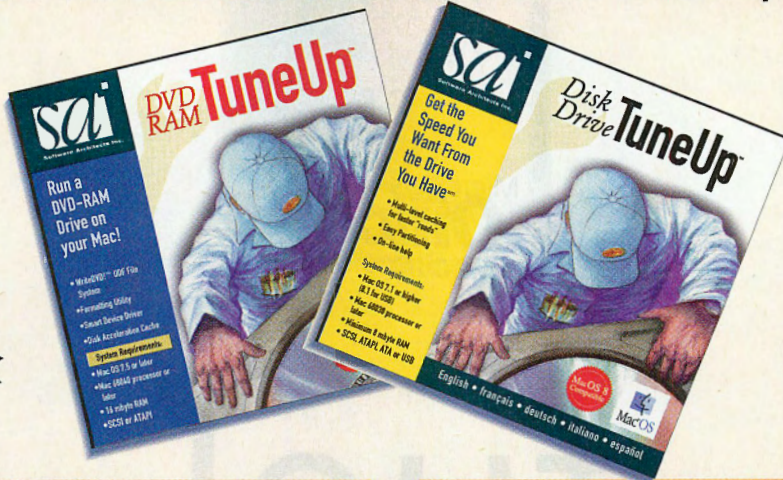
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DVD-RAM TuneUp requires Mac OS 7 or higher; Disk Drive TuneUp Mac 7.1 or higher & 8.1 for USB.

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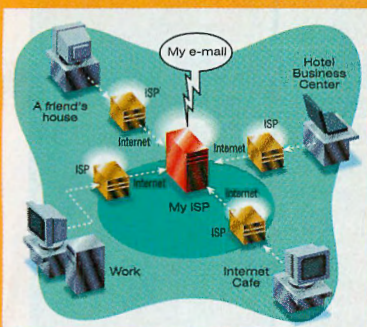
SLOW DOWN! SLOW DOWN! Oh my God, watch out for that firewall!



RINGGG! Is school in already?



MICE! MICE in my powercable! Get 'em kitty!



THE INTERNET REVOLVES AROUND ME! Yes it does!...Yes...it does!



This cover was done faster, cheaper, smarter, and easier than any previous covers.

SEPTEMBER 1999

highlights

26 Net Speed!

Super fast Internet access is here and once you get it, you won't know how you ever lived without it. Kind of like your refrigerator. Or your telephone. Or your sexy, black satin...um... anyway...high speed 'Net access is here and we'll tell you how to get it, if you should get it, if you can get it, and which route is the fastest. **BY DAVE HAMILTON**

32 Browser Brawl

It's a fight to the finish when Internet Explorer 4.5 with Outlook Express enters the ring opposite longtime foe Netscape Communicator 4.6 and only one can leave! Who will become the new heavyweight browsing champion? Stick close to the ring and you'll see we don't pull any punches comparing portals, mail clients, and speed with a special bonus feature round. **BY KEVIN SAVETZ**

40 MacAddict Free-for-All

Everyone knows that the best things in life—fancy cars, lavish jewels, six-course dinners at 4-star restaurants—are *not* free. However, if you're just itching for something for nothing the Web is loaded with free product samples, T-shirts, stickers, pet supplies, books, magazines, services and more. Go get 'em! **BY THE MACADDICT STAFF**

44 Be an Online Hermit

We recently stumbled across the paranoid diary entries of a cyber hermit who was determined never to leave his Mac again. After carefully washing our hands with really, really hot water and antibacterial soap, we found mentionings of ten cool tools that you shouldn't leave your Mac without. **BY DAVID REYNOLDS**

how to

72 Manage Your Email from Anywhere

Traveling without a PowerBook? What kind of lunatic are you? Well, at least you can still check your email. Here's how to get your ISP to send your mail to any Internet-connected Mac in the world. **BY JOSEPH HOLMES**

76 Turn Your PowerBook into an External Hard Drive

That's right kiddies, thanks to a little trick known as SCSI Disc Mode, you can hook your PowerBook up to another Mac via SCSI. No more slow-as-sap Ethernet or LocalTalk file transfers. Here's your step by step guide. **BY OWEN LINZMAYER**

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For reprints, contact RMS at 717-560-2001.

Volume 4, Issue 9

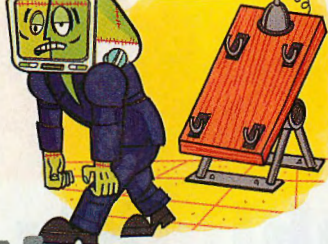
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every month

12 Editor's Note

Prison Guy's the editor?!?! That'll teach Dave not to gamble job titles on Quake III test matches.

14 Letters

Send us a letter or put up with reading these people's ramblings.

18 Scrapbook

Apple System Profiler 2.0 is one of the coolest, most powerful tools for digging into the inner workings of your Mac. Use it to spy on your hardware and software, but don't let the CIA catch you.

20 Get Info

We've got knockoffs of the iMac, Mac Savvy MP3, and the history of MacAddict (it's our third anniversary you know). Plus, we announce contest winners (really, we swear).

48 Reviews

Flip on over to find out if Final Cut Pro steals Premier's show, and if QuickTime 4.0 deserves your download time. Plus we look at two new Zip drives, Ricoh's 2.3 megapixel RDC-5000 digital camera, Tomb Raider Gold, and Falcon 4.

70 PowerPlay

Oh, sure, Tom Clancy *seems* like your run-of-the-mill best-selling novelist, but he's also the mastermind behind one of the hottest games this year—Rainbow Six. The man himself spills the beans on MacSoft's latest blockbuster title.

78 Ask Us

So many problems... and almost as many answers! Check out this month's Q and A for tech support on modems, network connections, and making cool Finder images.

104 Shutdown

We laugh in your general direction. HA! And we get a new cartoonist!



QUICK, TURN ON YOUR FORCE FIELDS! The city's under attack!

Mac
ADDICT 37
THE TEAM

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Thanks for joining us.

Earbuz dot com, right Don? How many root canals, Rob? They call her Jenmo! Clao, we've had a good run. Time for a new ride in the amusement park.



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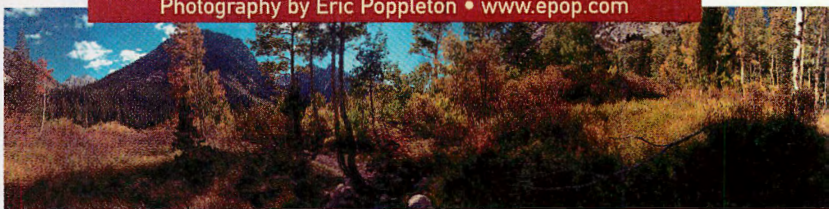
VR PanoWorx™



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Panoramic movies show the viewer a full 360 degrees vista. The movie is built out of a series of still photographic images, stitched together to form a single flat panoramic image which is wrapped into a barrel and seamed together. The viewer is placed inside, seeing the interior of the barrel as a panoramic vista. The viewer can look left, right, up and down, turning around to see all views of the 360 degree panoramic scene.

Photography by Eric Poppleton • www.epop.com



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Object movies feature multidimensional views of a particular object. The movie is constructed out of a series of still images (usually 36 for a single band, up to 684 for a full pole-to-pole multiband object movie) which it compiles to create the illusion of a three-dimensional subject. The viewer is given the impression that they are "holding" the object in their hand. They can then rotate it and even tumble it to view all of its sides from any direction.

Photography by Arcamedia • www.arcamedia.com



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VR SceneWorx™



SCENE

Multi-node movies are interactive virtual environments, referred to as "scenes," built by combining panoramas, objects, still images and linear movies. Nodes are joined together via linking tools which create hot spots used for navigating from node to node. The resulting movie allows the viewer to "walk" from room to room (each with 360 degree view), pick up and examine objects, watch linear movies and read text or view still images.

Photography by Kelly Bringham • www.pbproductions.com



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the disc



AAAAAAAGH!!! Somebody get me a salt shaker!!!



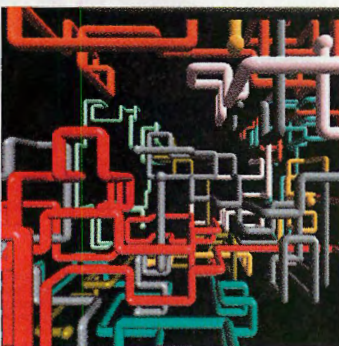
LAWYER FAKES OUT Microsoft's key witness? Tell me more!



HEY, PEPSI! Where's my endorsement?!



IT'S SLINKY, it's slinky...



Defy the Back-to-School Blahs!

highlights

Bugdom 1.0 Demo

You heard it here first folks... this game is really quite buggy... D'oh! Sorry, lame pun... couldn't resist. Seriously though, the graphics and animation in this cute 3D action/adventure game are simply gorgeous. As Rollie, you journey through the great outdoors as a pill bug in shining armor, rescuing ladybugs in distress, while battling evil garden-variety pests like slugs, and mosquitoes, and ants, oh my! If you've got a 3D accelerator card, you're in for a treat. If not, we'll give you a shoulder to cry on, but you can still enjoy the game without all the really spiffy effects.

RealPlayer G2

It's like having a radio and TV right on your Mac. This streaming audio and video player gives you one-click access to music, entertainment, news, and sports channels across the Internet, from all over the world. Boogie down in your cubicle to near CD-quality music, buy me some peanuts and Cracker Jacks as you listen to a ballgame, or enjoy a front row seat at a streaming movie trailer theater.

Tanaka Demo

Ladies and gentlemen, start your engines! This over-the-top racing game will have you screeching through some amazing 3D graphics and roadways, pulling some serious g-forces. Guide your craft through the streets of the industrialized planet of Tanaka in the year 2525. You'll need to buy a vehicle, engine, weapon, and shield, and then get ready to give your opponent a whiff of your exhaust.

Setting Sun 1.0

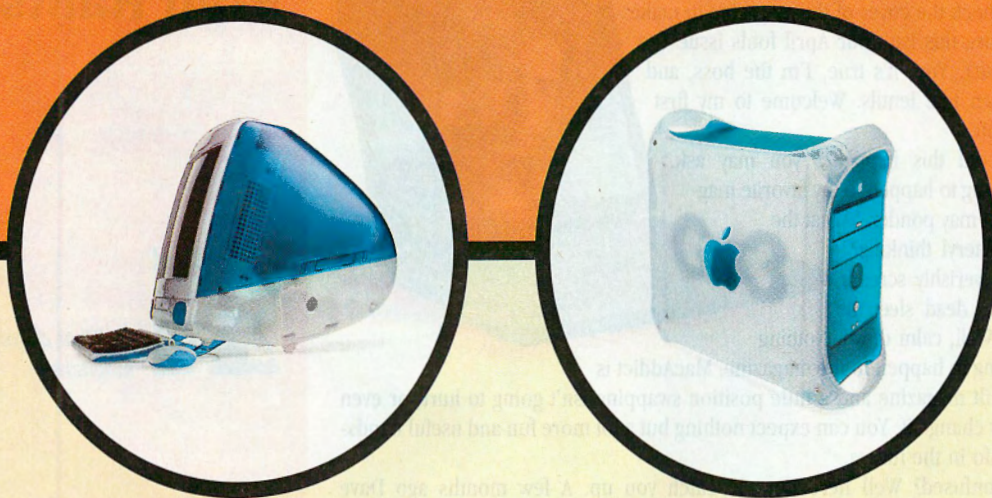
Absolute pure eye candy! This application-based screen saver certainly turned quite a few heads in our office, and crossed a few eyeballs I might add, as it flashed across the screen. From a collection of high-end 3D plug-ins (included), watch your monitor go up in flames, lose your lunch on the roller coaster ride, or procrastinate your day away watching a never-ending plumber's dream. And for those of you who've ever wondered what your desktop might look like under water? Let it Ripple!



Break out the hankies! Our resident Brit, Mark Simmons, is leaving his post—and his indelible mark—at MacAddict. Watch as we enjoy a perfect day of playing hooky from work in a little goodbye celebration at the Grand Opening of San Francisco's new Sony Metreon Center and send Mark off to the real world.

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editor's note

Holy #*\$@!!! You People Made Prison Guy Editor?!?!?!?

Yes, you heard correctly. Go ahead and check the cover of the magazine to make sure this isn't our April fools issue (go on, I'll wait). Yup, it's true, I'm the boss, and I don't even like lentils. Welcome to my first editor's note.

"How did this happen?" you may ask.

"What's going to happen to my favorite magazine?" you may ponder. "What the hell was Cheryl thinking?" you may feverishly scream out from a dead sleep at

2:30 AM. Well, calm down. Nothing

bad is going to happen to the magazine. MacAddict is

a team built magazine and a little position swapping isn't going to hurt, or even drastically change it. You can expect nothing but a lot more fun and useful hands-on Mac info in the future.

Still confused? Well here, let me catch you up. A few months ago Dave Reynolds decided that managing the day-to-day disasters (mostly inflicted by Cheryl) that rise up when running a magazine didn't leave enough time for writing and geeking out on technology. He thus used his editor-in-chief powers to dub himself executive editor of technology, and now he spends his days happily playing with Mac gadgets and writing. As fate would have it, I was offered Dave's former post as editor. I took it and here I am, in charge. Now that that's wrapped up, let's get to a topic. Did someone say "Microsoft"?

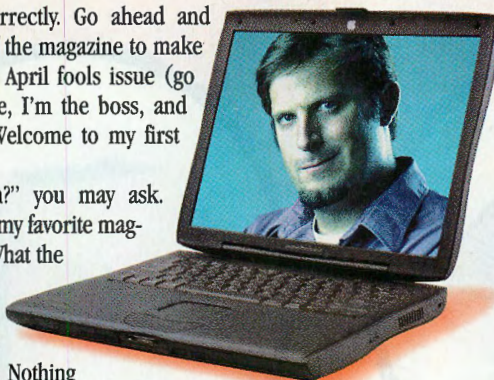
Microsoft is on Crack

For some time, we've been trying to tone down the anti-Microsoft sentiment in the magazine. It's a new era after all. Apple's doing well and Apple and Microsoft have started playing together without resorting to (much) hair-pulling, scratching, or biting, just like Stevie Jobs said they would. But, while researching Microsoft's new Media Player demo for the Mac, I unexpectedly came face-to-face with the mindbogglingly craptacular MacTopia—Microsoft's Mac-oriented Web disaster. Let's quit pretending. It's time to call that lame, hack of a company what it is: a lame, hack of a company.

I first detected the presence of sheer idiocy the second I entered through the MacTopia main gate. It loads...so...very...slowly, and immediately pulverizes the visitor with self-promotional catch phrases like "Mac Office 98 and Office 2000 for Windows: Symbiotic!" Huh? Determined to get some info on Microsoft Media Player for the Mac, I plowed forth, only to realize that nowhere is Media Player mentioned on the site (I eventually had to do a keyword search to find a single page of info and a download link). But, while there I discovered that the site's own news and press release area hadn't been updated since the day it was announced at Macworld Expo...last January.

MacTopia sums up Microsoft's core problem: It needs to up the quality of its products. It would be a lot easier to be nice to Microsoft if its products didn't just suck (then you'd only have to forget how mean and tyrannical they are). And until the powers that be at Microsoft decide they want to make solid, high quality products, the company is going to encounter stiff resistance from a community of computers users accustomed to ease-of-use, power, and elegance—us Mac users, that is.—RC

"It's time to call that lame, hack of a company what it is..."



Staff Rants

Having a place for just the editor to spout off doesn't seem fair to the rest of the staff, does it? So starting this month, MacAddict is going to give equal time (er, I mean *some time*) to the opinions of a few of the staff members. Here's what they're thinking this month:



Kris Fong
New Media Editor

Q.What do you do at the magazine?

A. Drink lots of coffee, instigate trouble, and generally sit around surfing the Internet or playing weird games. I really do get paid to do that last part.

Q.What do you think of Prison Guy as editor?

A. After he stole my lunch money, I knew he was bound to take over the establishment..



David Reynolds
Executive Editor

Q.What do you do at the magazine?

A. Make coffee and play StarCraft. Wait—Myth. Wait—Quake III. Wait—Word. Actually, I write about all things Mac and struggle to come to terms with my aging 9600—which I love, but I'm now coveting this blue-and-white G3.

Q.What do you think of Prison Guy as editor?

A. He scares me, but in a good way. Rob has a natural magazine knack, and he can drink Cheryl under the table.



Ken Bousquet
Art Director

Q.What do you do at the magazine?

A. Play basketball, eat blueberry muffins, and complain about stories being turned in late.

Q.What do you think of Prison Guy as editor?

A. He's really got his priorities straight: come in at ten, play basketball for a couple hours at lunch. After that I kind of lose track of him.

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letters

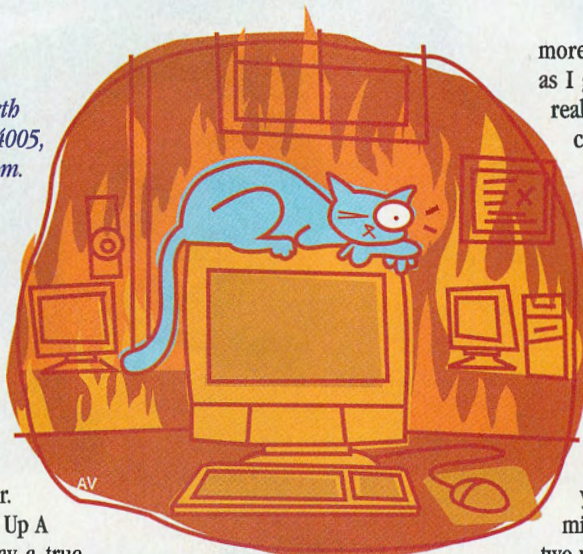
Do you ever get the feeling that things are getting stranger by the minute?

This Month

WRITE TO US: MacAddict, 150 North Hill Dr., Suite 40, Brisbane, CA 94005, or email to letters@macaddict.com.
FOR CD PROBLEMS: Go to <http://support.imaginemediacom.com>.
FOR SUBSCRIPTION QUERIES: Call (toll-free) 888-771-6222.

LIAR! LIAR! CAT'S ON FIRE!

I just recently read the May '99 issue of MacAddict and in the Letters section a person asked about a cat sleeping on a monitor. You titled it, "Not Unless He Hacks Up A Hairball." I HAD to write and relay a true story about the nursing home where my mother-in-law lives. The resident cat loved to sleep on top of their (PC) monitor and one night the office caught on fire. The fire department deemed the cause of the fire to be too much cat hair in the high voltage section of the monitor. Please warn your readers about the possible dangers of letting their pets sleep on their monitors. Monitors need adequate ventilation to avoid overheating



and possible fire. Fortunately, the nursing home fire only destroyed the office. No one was injured, not even the cat.—STEVE HEITKE

KID TESTED, RUSS APPROVED

I read every Mac publication I can get my hands on. So, naturally when I found yours, I added it to my monthly reading. I never considered it an essential read, feeling it was

more entertaining than instructive. However, as I got ready to toss out old magazines, I realized it was old MacAddict issues that I couldn't bear to part with. I am not sure whether you are getting better or I am just figuring it out, but I know I will keep reading and saving the copies.—RUSS LESEBERG

DON'T DO IT!!!

Ever since I bought my first Mac nine months ago I've resisted playing games in order to focus on my work. But you just had to include the Starcraft demo on June's disc, didn't you? I thought I'd check it out for a minute and dump it in the trash. Now it's two weeks later and my hand is twisted into a hook-like shape that can only hold round objects the size of my mouse. My wife left me, I lost my job, my eyes have permanently dried open, and I've developed oozing sores on my backside. What little sleep I get is filled with nightmares of overwhelming Xenomorph forces and I sold my left kidney on the black market for \$50 to buy the retail version of the game. Damn you Macaddict! You just lost a subscriber! Wait a minute, I didn't mean that...What's this Myth game I've read about? Is it any good?—ROB BRUMM

WE'RE JUST TASTELESS

Please tell me that more than one person at MacAddict knows the five iMac colors! You work on Macs, eat and sleep Macs, and evaluate Macs. Your children are MacAddicts and so are your dogs. So, why do you use awful explanations like red, or "duh"?—DAVID DELP

THAT WAS FAST

In the teaser for the article on page 80 of the July 1999 issue of MacAddict you said you're waiting for someone to make a CD recorder that will convert your record into a CD. That wait has been over. We've been selling that product for months now. It's called a CopywriterA2D and has built-in analog-to-digital conversion for your CD. You can also make your own favorites



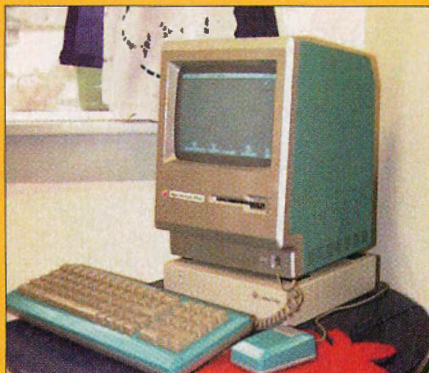
GET ON, GET ACTIVE. Talk to us and to other Mac addicts at the Web site.

Recently Sighted

What is that? No, over there by the window. Is that an iMac sitting there in that preschool room? No, it's an iPlus.

OK, so I had a small donation budget for my wife's classroom. In fact, the budget consisted of a few cans of spray paint and a little help from the MacAddict crew. I thought the colorful look and fun (although black and white) interface would get the attention of the kids and place a subliminal suggestion in their minds to make their parents go out and get a Macintosh computer. The kids love it, they have improved their recognition skills using Keywack, and have really gotten into drawing using an old version of MacPaint.

If any of you have an old Mac that you don't need, I suggest that you set it up with some software and donate it to a church or other preschool program. If there is anyone out there



willing to take on the responsibility of showing a few kids at a young age how easy a computer can be, I guarantee you it would be well worth the time spent. You never know, one of these kids might end up being the very next interim CEO of Apple.—BREVARD BLYTHE, NC

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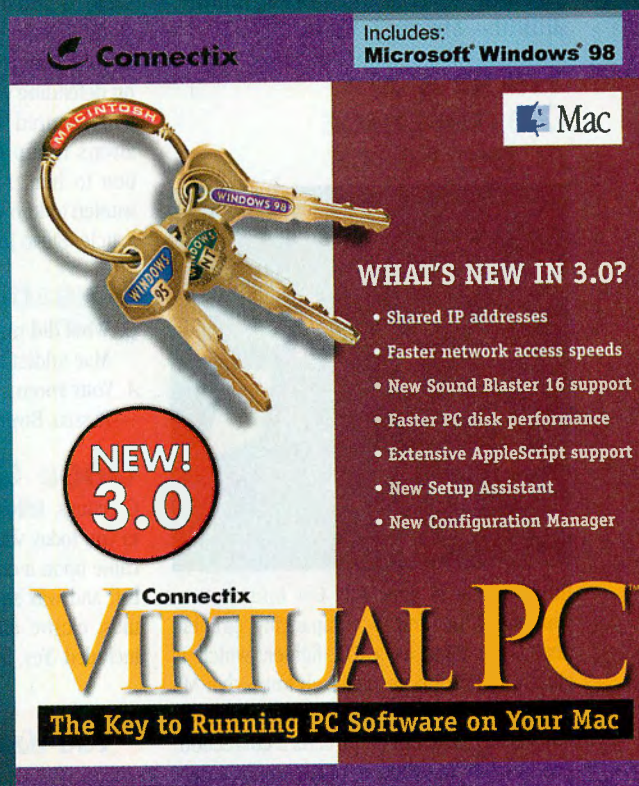
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discs from other CDs and it accepts input from any analog device. It's inexpensive and doesn't require a computer. You can get more information on it from our Web site at <http://www.cds.com/duplicator>.
—JERRY WARNER, CD SOLUTIONS, INC.

OH, IT WAS NAMED FOR SOMETHING...

There is an excessive number of Macintosh users who don't name their hard drive. Mine, of course, is named Squishy, in memory of my little pug, and I've helped someone else name theirs, but this banal default CANNOT CONTINUE! I'm ranting because I was looking at an old, old issue in which you printed a letter where someone said that he was clever because he had given all his desktop folders colors (with labels), yet his hard drive was called Hard Drive! ARGHHH-HHHHH!—MATTHEW J. WAGNER

THERE'S A DISTURBANCE IN THE FORCE



In an article in your July Get Info section, your headline and accompanying graphic depicts an iMac as a TIE fighter, which is clearly inappropriate, as we all know that MS (the author's initials—coincidence? I think not!) is the REAL evil empire. As a correction, I've thrown together a quick replacement graphic for you to redeem yourselves. If you're going to use Star Wars imagery, I recommend you replace R2-D2's head with a blueberry iMac. "Help me Obi-Jobs! You're my only hope!"—DALE CRITCHLEY

UH, WE MEANT TO DO THAT

Thank you for your fine article on the multilingual Mac ("The Virtual Mac Traveler", Jul/99, pg 40)—the Meyeroffs did a great job! Unfortunately, the multilingual capability of the Mac OS has long been one of the Mac's best kept secrets, but hopefully you have helped turn that around. One small correction: the "Packing for the Trip" sidebar states

that ASCII uses two bytes for 256 characters and Unicode uses one byte for "tens of thousands" of characters, when in fact it's reversed: ASCII uses one byte per character and Unicode uses 2 bytes (16 bits). There are other two-byte encoding schemes in use, but the thing about Unicode is that it unifies the world's language scripts into a single grand scheme. By the way, one application that's fully capable with every language script ships with every Mac: SimpleText.—DALE DELLINGER

It's true, and the error was introduced in the editing process—not by the article's authors.—DR

HAIL! HAIL!

I was recently approached by my Wintel-loving "friend" who, for no reason, said, "Macs suck." I asked why and he said, "Macs are slow." I remembered the article on bluffing in your May issue and how it had a section on defending your platform. I whipped it out and lectured the Wintel idiot: "RISC will always trump CISC." I read the whole section to him; I guess he couldn't read and wanted to know the truth. I thank you for the article. Steve Jobs is GOD.—DEVLIN CAREY

SINBAD, WATCH OUT

Q. What did one Mac addict say to the other Mac addict about his clean room?

A. Your room's I-mac-ulate.

—RUSSELL BOYNTON

GOOD QUESTION

Greetings, fellow MacAddict readers. I come to you today with a grave situation. I recently came upon a copy of the endangered species list, and was shocked to find that one of the most elusive animals known to man wasn't included. Yes, friends, I speak of the dogcow.

Apple's beloved mascot Clarus is the only existing dogcow known to man, and the federal government has ceased to recognize the ecological importance of her presence! Come on, who would you rather have on your Page Setup screen—Clarus, or a blue whale? I urge all faithful Mac addicts to write to PETA, the ASPCA, the president, and your congressman, and ask that our cherished dogcow be added to the endangered species list. After all, if we don't save her, who will?—RAINEE SCOTT

WE'RE ALL FRIENDS

In your magazine you always talk about Nikki and all the rest of the staff. Who are these people and how does everyone know about them?—TIM LEAVER

See the Editor's Note for a heads-up on who's who.

APPLE GIVETH, APPLE TAKETH AWAY

What has happened to the Apple section on the Disc? If it was kidnapped buy some angry "PC Gamer" subscribers I would be happy to go on a midnight clubbing.—DEVLIN CAREY

WE LOVE RAINBOWS AND UNICORNS

I thought the July staff video had higher quality video than I'm used to seeing from you guys—whatever you're doing, keep it up! Also, as for content, I like the interviews with the staff on various subjects and I love when the staff does something really wild like paint-balling the PCs, although I could easily stand even more action than that. How's about a raid on PC Gamer headquarters? I also love the video movies you sometimes have like Cafe Noir and Escape from MacAddict.—TOM HACKETT

YOU KNOW YOU'RE A MAC ADDICT WHEN...

...you wish your secretary could multitask like OS 8.6—HOLLY THOMAS

...you clean up your desk and find one or more half-unbent paper clips.—ANDY LYTTLE

...you and your friends compete to see who can get more letters published in the best magazine ever (MacAddict, duh!). Yeah! One more point for me!—MARK BURNS

...you shout out during an opera without realizing it, "Quit this application!!" (Plaintalk Applescript)—ANDREW T. SCHNICK

...you name your cat PowerPC (pussy cat).—GUY SCALISE

...you think that amellorate means "to drive to near bankruptcy".—CHRIS ALBRIGHT

...Bondi Blue was the official color at your wedding.—PHILIP KIRKHAM

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The Mac OS 8.6 Book

by Mark Bell

Get up to speed fast on the latest revision to the Mac operating system with this inclusive how-to manual.

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Plus... Companion CD-ROM with images and fonts for use on the Web, Internet tools like Eudora Light, and demo software

600 pages, softcover Publisher's Price: \$39.99

My iMac

by Andrew Gore

Access up-to-the-minute information on the hot, new iMacs in this comprehensive guide by the editor-in-chief of Macworld magazine.

- Provides undocumented information and insider tips on using the iMac and its bundled software
- Covers the iMac's non-standard hardware, including the USB port and Internet connectivity
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scrapbook

If it's shiny, new, odd, or just plain interesting, then it'll show up here.

Profile of a Profiler

by David Reynolds



The newest version of the Apple System Profiler—a software widget that's been around since System 7.5.3—is like the puffer fish of system utilities. Not only can it expand to twelve times its size when frightened, it's also a powerful utility that can tell you all about your Mac, including things you wouldn't be able to find out without consulting 17 different utilities and pulling your Mac apart to examine what cards are in what slots. And, as if that weren't enough, the Apple System Profiler also has a comprehensive AppleScript dictionary. Here's all you ever wanted to know about Apple System Profiler 2.0.

Let's See—Did I Upgrade?

The Apple System Profiler opens on the System Profile-tabbed panel—go figure. Here, you'll find out all about your Mac, including the system software version, startup drive information, memory usage of all kinds (cache, virtual, and real), and you'll even get a chance to peek into your Mac's production information (including its ROM number). There's a wealth of über-geek information here.

Ah, Memories

Bet you didn't know your Mac used this many kinds of memory, huh? The Apple System Profiler reports how much RAM is used as disk cache, how much disk space is used for virtual memory, and how much built-in physical RAM your Mac has (and what size module is located in a given slot, for some Mac models). The Profiler also provides information about any L2 cache—either backside or external. This item is especially useful for setting up memory interleaving.

Identify Yourself

Your Mac can tell the world what model it is, and here it does—machine ID 67. It can also tell the world what processor is plugged into it, and the Apple System Profiler is good at detecting that, too. Here we have a 9600 that's been upgraded with a G3 card, and everything shows properly here. For good measure, Apple threw in the keyboard type here—yes, that's a *genuine* Apple Extended Keyboard connected to this Mac.

Getting Connected

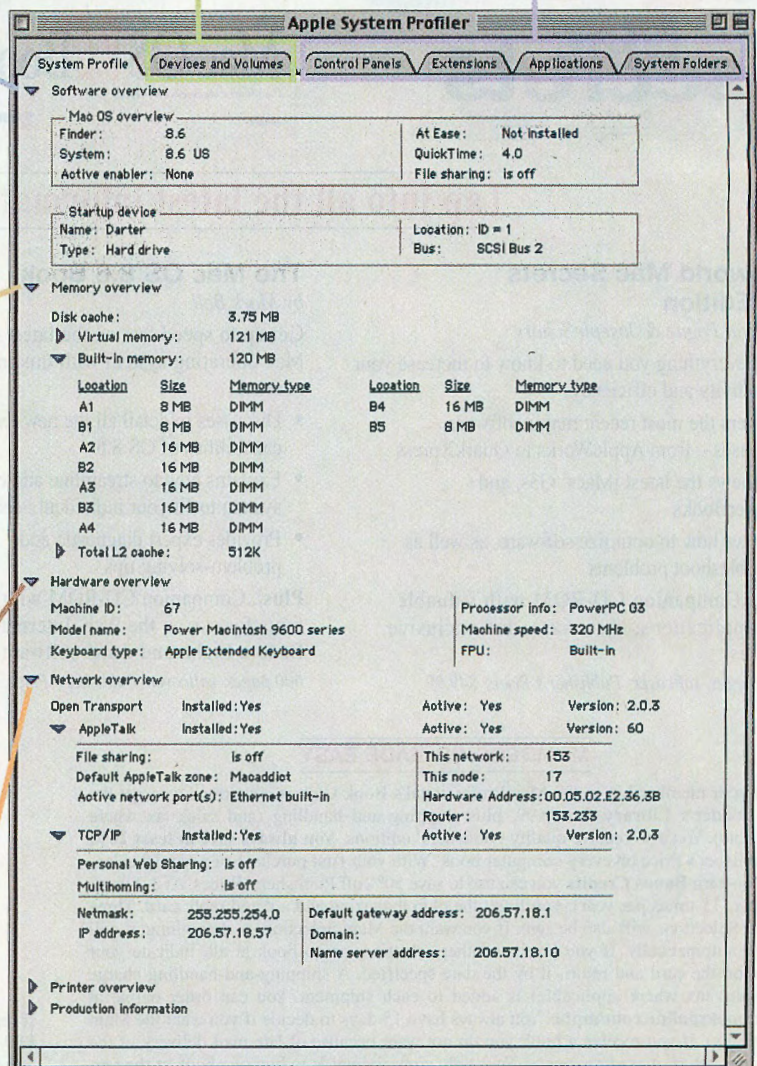
When your Mac reaches out and touches some other Mac, it's doing so through its networking software—usually Open Transport. The Apple System Profiler will tell you all about that software, including version numbers, network zones, connection method, and even your hardware address—hey, your Ethernet card needs a place to be, too. You can also find out all about your Mac's TCP/IP settings here.

The Rest of the Hardware

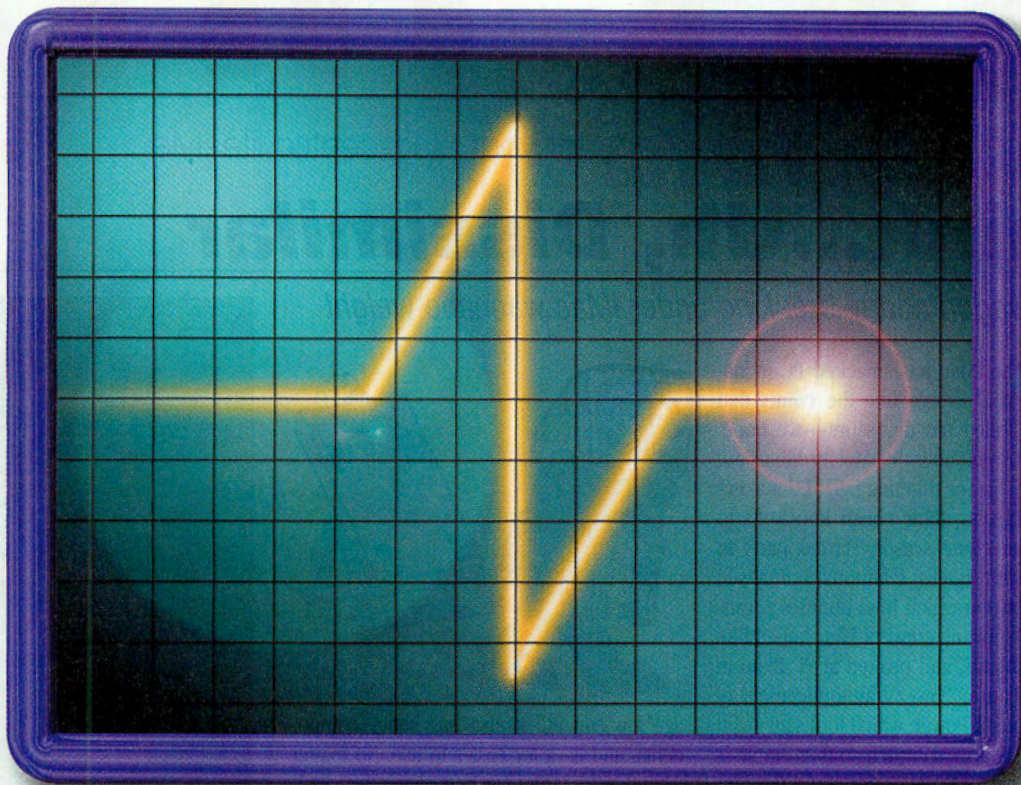
The second tabbed panel goes into excruciating detail about all that other hardware connected to your Mac—the various SCSI, PCI, USB, ATA, FireWire, network, and floppy disk devices. About all it doesn't cover is serial devices (such as modems or PDA cradles).

All About the Software

If you want to know exactly what control panels, extensions, and applications are installed on your Mac, just click the appropriate tab. You can even look for valid System Folders by clicking the last tab—it tells you which volume has the active System Folders and where any additional System Folders are, which can be great for tracking down odd system behavior due to two (or more) System Folders on the same volume. The System Folders tab only finds “blessed” (or valid) System Folders, so if something's wrong with a System Folder, it won't show up on this list—a potential troubleshooting tool for the “flashing question mark” syndrome.



There's only one utility in the world that does more for your Macintosh than TechTool Pro 2...



Introducing TechTool Pro 2.5

MicroMat's disk repair and Macintosh troubleshooting utility just became a whole lot better. Loaded with new features like Trash Cache™, which allows you to resurrect files you've accidentally deleted. Or our new Automated Diagnostic feature that checks your drives at the time intervals you specify, so you're always sure your drives are in top shape. TechTool Pro 2.5 even now supports new technologies like FireWire drives, USB floppy drives, System 8.6, all of the latest Macs and much more. But the real power of TechTool Pro 2.5 isn't in the features

you can see, it's in the features you can't see. Like a multitude of new drive repair routines that can save data that other utilities would simply abandon. An improved recovery system that will find lost files in the darkest caverns of a damaged drive. You'll also find improved performance on key features like disk optimization. But maybe the feature you'll find most interesting about this version is the price: FREE*. If you own any version of TechTool Pro 2, just go to our web site and grab the updater. You'll be glad you did.

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*Version 2.5 is available at no charge to registered TechTool Pro 2 users as an updater application directly from the MicroMat web site. If you do not wish to download the updater or would prefer a new CD, they can be purchased for \$25 plus tax, shipping and handling by calling the phone number above. Please have your serial number ready when calling. Prices subject to change without notice. ©1999 MicroMat Inc. All rights reserved. TechTool is a registered trademark of MicroMat Inc. Fix Different is a trademark of MicroMat Inc. Macintosh is a trademark of Apple Computer, Inc.



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Gadgets, widgets, and doodads for your Mac-centric lifestyle.

Think...Uh, Dissimilar

Bandwagon nearly breaking under iMac wannabe weight

The iMac has smacked PC industrial design like the comet that killed the dinosaurs—we hope. A year after the iMac broke us out of beige prison (or thinking jail), PC makers are finally getting their cheap knockoffs to market. The clone season started back in February with Intel's infamous bunny-suit fashion show (in which Intel bunnies paraded onstage sporting concept PCs shaped like fish and rabbits), and peaked at PC Expo in June with Future Power's announcement of the audacious E-Power, which looks an awful lot like the iMac—so much so that Apple is suing to block E-Power sales. Even the big-name PC thugs—Dell, Gateway, IBM and Sony—are all coming around.

On the surface, PC makers are at least *trying* to do something other than beige metal boxes. Already, the new line of fashion-conscious Wintel computers often cost less than the iMac, even if you factor in the monitor. Does that mean these knock-offs will knock Apple out? Probably not.

Price isn't everything. Although the iMac may be a little more expensive than the aver-

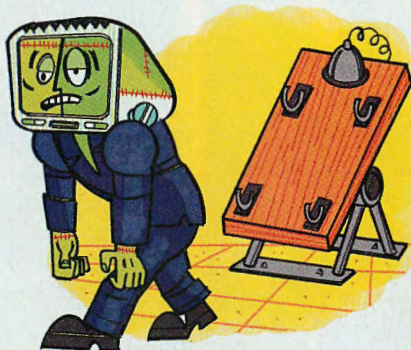


Illustration by Mike Gorman

age low-end PC, it also has better components, and is a *lot* easier to use. No matter what they look like (or how cheap they are), Wintel boxes *aren't* simple.

Fashion is more than just color. Apple has paid meticulous detail to design and is well ahead of any competitor in using translucent colored plastics.

Apple is the leader in this market—And that counts for a lot. The computer public, thanks to Apple's marketing, now associates easy, stylish computing with Apple. Period. If anyone else wants a piece of that market, they'll have to play catch up.—NC, DR

Knockoffs on Parade

The Fashion Show:

It all started when Intel showed off several concept PCs last February. Although they are, charitably speaking, interesting, they're not exactly inspiring. We take that back—they inspired us to make some pretty good jokes.



The E-Poseur: Er, E-Power:

pure Wintel in iMac clothing. It looks like an iMac, but you can feel the hand of Gates deep inside. Future Power only renamed the colors on these scary clones. Instead of nourishing, fruity goodness, pick a cold, dead gemstone: ruby, topaz, sapphire, emerald and amethyst. E-Power's machines should be (dis)gracing shelves by the time you read this—barring an injunction. *Whatta maroon.* <http://www.futurepowerusa.com>



MacAddict gets older...Again

It's that time of year when we wax nostalgic about our youth and run off at the mouth with a bunch of inside jokes. It's definitely a MacAddict thang that you just wouldn't understand. Or would you? For all of the MacAddict addicts that have been along for the entire ride (if you ask us if we're there yet one more time, we'll never take you anywhere again!) we've compiled a guided tour down memory lane. Happy Birthday, to us!



Gilbert Amelio, raved over Open Doc, tried to convert a PC user, interviewed "internet visionary" Larry Tesler, and told people why they should stand by their Macs.

Oct. 1996-April 1997:
Dave plays Marathon.

July 1997:

We put ourselves on display with the M.A.R.S. (MacAddict Remote Sensor) probe. Experiment turns ugly when readers start tattling to Cheryl about our extended coffee breaks.



Sept. 1996:

The first issue of MacAddict hits the stands! We profiled ex-Apple CEO Dr.

May 1997:

MacAddict gets a clean room for the ultimate in professional lab testing. Our motto: If it's good enough for us, it's good enough for you.



I Want My MP3

And it looks like I might get it!

The Music Industry loathes it. Music artists embrace it. Music fans want it. Love it or hate it, MP3 is here to stay as digital music takes a huge step into mainstream entertainment. Diamond Multimedia's huge win against the Recording Industry Association of America (RIAA) over the Rio, a portable MP3 player, gives the green light to other hardware manufacturers shipping and developing MP3 players. Manufacturers are already flaunting their shiny new things in the form of portable and car audio players. And while we rant and rave about the fact that portable players are currently only available to those who dwell on the Dark Side, Mac users will have something to sing about in coming months. RioPort Inc. (a subsidiary of Diamond) announced that the upcoming Rio 500 MP3 player will be available for an estimated street price of \$269 in August. Woohoo!

So what is MP3 you ask? MPEG Layer 3, or MP3, is an audio file format that compresses digital sound into tiny files that retain near-CD quality, making it easy for Internet users with even the slowest Internet connections to download MP3 audio files. The file can only be heard through a player that supports this format (available only on PowerPC-based Macs). There are currently quite a few software MP3 players for the Mac that you can download from the Internet.

And while MP3 is beginning to change how we listen and acquire music, the Music Industry is also beginning to realize the market available for digitized music. MP3 technology may have made them mad, but now they intend to get even. EMI is partnering with Liquid Audio, who will convert EMI's roster of artists into its proprietary audio for-

mat, preventing illegal copying. Sony will begin to sell digital downloads of its artists utilizing Digital On Demand. And a new group has formed—the Secure Digital Music Initiative (SDMI), made up of music, software, and hardware stakeholders—who is developing alternative technology that will enforce copyrights.

So what does this spell for the future of MP3? Against the wishes of the RIAA, it certainly won't be going away anytime soon, but you can probably expect to see a lot more digital music formats sprouting like weeds in months to come.—KF



get info

Got a Power Mac? Need MP3-playing software? Check it out!

MacAMP

(<http://macamp.net/>) Beta

This popular player is still in its beta stage, but is updated often. The most downloaded player of the bunch features a nice interface with user tweaks guaranteed to make hackers happy.

MacAMP Lite

(<http://www.macamp.net/>) \$10

MacAMP's little bro is bare-bones basic, but gets the job done. No slick interface to knock your socks off—only basic button controls.

SoundJam MP

(<http://www.casadyg.com/>) \$49

Finally a Mac MP3 player with all the bells and whistles! We've seen the specs and we're already drooling. Not only can you play MP3s and streaming MP3s, but this player will also encode and record your music into high-quality MP3s. It also features a 10-band EQ and a whole wardrobe of interfaces for fickle fans.

RealPlayer Plus G2

(<http://www.real.com/>) \$29.99

This full-featured player will allow you to play streaming audio and video, including streaming MP3.

SoundApp 2.6.1

(<http://www.csstudents.stanford.edu/~franke/SoundApp/>) Freeware

The cream of the crop! This rock-steady player lacks the coolness quotient, but makes up for it in performance. This robust player won't skip a beat, even when operating in the background.

QuickTime 4

(<http://www.apple.com/quicktime/>) Freeware

Apple's latest version of QuickTime sports a brand new look, and it now supports MP3.



Sept. 1997:

Cheryl makes us brush our hair and smile pretty at the camera for our first anniversary photo. Also, Gil Amelio resigns from Apple. Yet another reason to celebrate!

Oct. 1997:

We first discover Jared, who went on to become a Blockbuster hit.

Jared

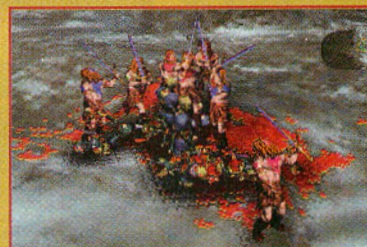


Jan. 1998:

Nikki and Kathy tell Rob he's fat. Six months later, Rob's alter ego Prison Guy makes his first appearance at Kathy Tafel's going-away party. Coincidence? Probably.

Nov. 1997:

MacUser merges into MacWorld prompting a MacAddict memorial, the entire staff escapes to Cabo, and future MacAddict editor Rob Capps sneaks onto the staff as reviews editor. If only we'd known then...



Feb.-March 1999:

Dave plays Myth.

get info

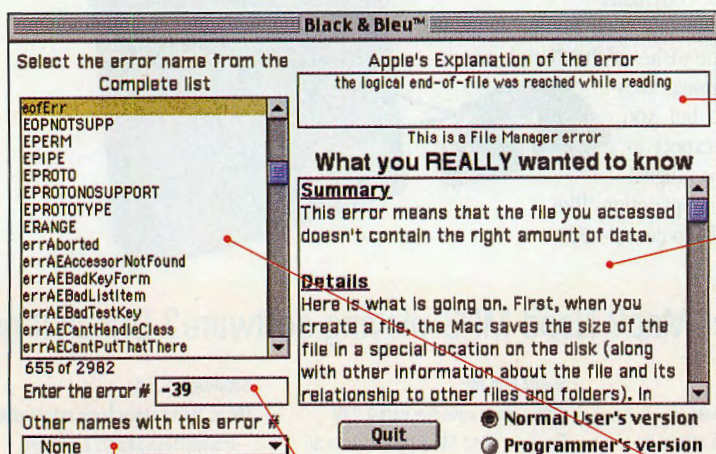
get info

Shareware Pick of the Month

BLACK & BLEU

SHAREWARE FEE: \$39 URL: <http://www.bleurose.com>

REQUIREMENTS: System 7 or later, 900K of memory



What Apple says the error means.

What the error really means.

A complete list of errors for your browsing pleasure.

"Synonyms" for this error (an error by any other name still stinks).

Enter your error in this box, and you'll get an explanation to the right.



FIND THE SHAREWARE Black & Bleu on The Disc.

It's delicious, it's delightful, it's de-sugar-free. It's actually none of those things, but the shareware utility Black & Bleu should become a standard tool of every Mac troubleshooter. Black & Bleu is a Mac OS error code analyzer with access to information about 3,000 Mac error codes. If you've ever wanted to know what a Type -39 error (or almost any other error, for that matter) is in a

language you can understand, Black & Bleu will tell you all about it, and it will give you some advice about what to do about the error.

It's a little pricey for a shareware utility, (\$34 per year) but the information it contains is actually useful—unlike many other programs that just report the programmer's version of the error without translating it for the rest of us.—DR

Add an IDE drive to your G3

Although you may not know it, some Power Macintosh G3 desktops let you add two more internal IDE drives. Some G3 models let you add a second drive to each IDE channel—one on the hard drive channel, and one on the CD-ROM channel—in what is known as a master/slave hookup. The key advantage to this is that big IDE drives are getting obscenely cheap.

Here's how to tell if you're one of the chosen ones who can add a second drive to each channel. If you own a G3 all-in-one, a Power Macintosh G3 Blue and White with a U bracket in the rear drive bay, or a beige G3 with the ATI Rage Pro chipset, then you're in luck.

Make sure the drives that are already installed are set to be master drives, and then set the new drives to be slaves. Mount your second drive in the case and plug in a power cable hanging from the power supply. Then, just use an IDE cable with three connectors—one for each drive and one for the motherboard—to connect the drives.—DR

All information in Tech Info Tidbits is taken from Apple's Tech Info Library at <http://tli.info.apple.com>.



June 1998:

We quietly put an end to the Kidz Stuff section. No one seems to notice. Whew.



July-August 1998:

Dave plays Diablo.

Dec. 1998:

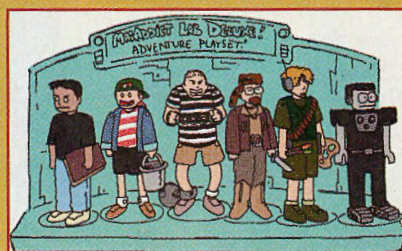
The Disc ships with the Autostart worm. Dave feels everybody's pain.



April 1998:

Grizzled stub Dave Reynolds replaces cute-as-a-bug Cheryl England as ringmaster over the MacAddict circus.

Kidz Stuff



Sept. 1998:

We turn two and get a bunch of new dolls to play with for our birthday. Rob interviews Steve Jobs at Seybold San Francisco. Memorable quote: "Nice to meet you."

January 1999:

Nikki interviews Steve Jobs at San Francisco MacWorld. Memorable Quote: "Is MacAddict a Web-based publication?"



Take out a radar tower
to cripple the enemy's
intelligence.

The forest provides perfect
cover for surprise invasions.

Launch an invasion
from the sea.

Control the high ground.

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to take out enemy encampments.

Bombard the enemy from
the safety of the sea.

3D tanks move smoothly over the
hills as they move into position.

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The word is spreading across the map. Total Annihilation is poised to redefine real-time strategy games on the Mac.

Total Annihilation is a real-time war game featuring true 3D terrain and run-time generated 3D units. Tanks drive up and overhills, tilting and rocking with each bump in the landscape and impact with enemy weapons.

Battle on diverse landscapes from lava worlds to vast island-dotted oceans.

Build defenses high in the hills for a better view and a better shot. Planes bank and dive in intense air-to-air combat. Amphibious tanks drive into and dive underwater for surprise attacks.

Total Annihilation's 3D landscape is a revolution that demands deeper strategy and generates more realistic game play. Mobilize your forces and experience the new landscape of war!

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It's Hacktackular!

Usual cool hacks come out of MacHack conference

Every June, Mac developers, engineers, and hobbyists converge on Dearborn, Michigan to drink enormous amounts of caffeine, stay up for days on end, and code like demons. The event is known as MacHack, and it attracts all kinds of Macintosh hackers—hard-core programmers and casual tinkers alike. The conference begins at 12:01 AM on a Thursday and continues through Saturday—with no breaks for sleep.

"It's grown into this hyper-kinetic caffeine-crazed, sleep-deprived soiree," said Hackmeister Scott Boyd of The MacHax Group.

And, as part of this annual ritual, conference attendees are invited to come up with a cool hack in a hack contest. This year, the top hack (which received a standing ovation) was Lisa Lippincott's Unfinder—a brilliant hack that adds an undo command to the Finder. This hack lets you undo emptying the trash, making

an alias, or moving a file—something that engineers on the System 7 team discussed adding to the Finder way back when.

Lippincott commented that the hack brings the Mac OS up to 1984 standards by adding an undo command. An unnamed publisher attending the conference offered to buy Lippincott's hack on the spot, but she declined, saying that the utility ought to be free.

Other hacks included Eric Traut's Out Of Context Menus, which won second place in the hacks competition. The hack takes contextual menus from other applications and makes them available in the Finder. Some of the items (such as gaussian blur and duplicate) even work on Finder windows.

A seven-year-old girl named Rachel Green entered a respectable AppleScript hack—now we feel like massive underachievers who go to bed early.—DR

We Have a Winnah! And it's probably not you!

Cross your fingers, stop rubbing that disgusting rabbit's foot, and if you've been holding your breath all this time, dear God, get to a doctor! We have chosen a winner for our May issue's Free-for-One Deal, and unless your name is Joe Kendall and you live in Hornepayne, Ontario, it's not you! No, you will not be enjoying free copies of Aladdin's Spring Cleaning and Stuffit Deluxe

worth \$130. No, your name will not be mentioned in this issue. No, you are not really good-looking. Oh, sorry, we didn't mean that.

Don't feel too badly, though. We picked the winner at random from over 500 email entries. It's not like you didn't win because we don't like you—unless, of course, your name is Esther Dyson, Bill Gates, Celine Dion, or Jar Jar Binks.—NE

NEW FOR THE MAC

Site Cam 4.0

Rearden Technologies; 510-523-2267, <http://www.rearden.com>; \$199 (\$499 for five-pack license); Now shipping

If you've wanted to experiment with a Web cam but just can't face setting up a Mac OS X Server rig to do the trick, Site Cam 4.0 offers an attractive alternative. Site Cam 4.0 features an integrated Web server, Java controls, optional display overlays, built-in FTP, motion detection, support for multiple cameras, and the ability to create time-lapse movies. Best of all, Site Cam can even run on 68K Macs running Mac OS 7.6 or later.

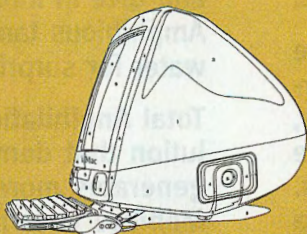
Flash 4

Macromedia; 800-457-1774; <http://www.macromedia.com>; \$299 street, \$128 upgrade from Flash 3; Now shipping

Vector animation buffs rejoice—Flash 4 has arrived, and it puts polish on the Flash venue. Flash 4 now features support for MP3 streaming audio, text entry field support, and an enhanced selection of Actions for things such as basic math and draggable interface items without programming. Flash's interface has been given a makeover for faster, easier authoring, integrating new palettes, drawing tools, simplified layers, an optimized timeline, and a new publish command that includes QuickTime 4.0 export capabilities.

Feb. 1999:

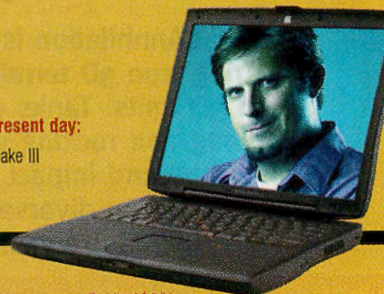
We tell you how to do a whole bunch of bad things and remarkably don't get sued! Plus, Jeff Titterton loses a paintball battle with a PC, though some readers believe he'd rather be attending to his unicorn collection.

**April 1999:**

Our April Fools joke gets you again. Suckers!

June 1999-present day:

Dave plays Quake III

**March 1999:**

MacAddict goes to Cozumel, Mexico for intensive off-site brainstorming and pre-summer tanning session and you didn't! MacAddict finally interviews Steve Jobs officially. Memorable Out-Of-Context Quote: "Frosting tastes good. I think it will be pretty popular."

May 1999:

An outraged reader, angered over the elimination of his favorite section, phones us and demands that we bring back Kidz Stuff.

Sept. 1999:

Due to the time demands of playing the Quake III test, David Reynolds moves to a writing job and Robert Capps takes over as chief grizzled stub.—NE

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speed!

Net Speed!

by Dave Hamilton

LEAVE YOUR 56-KBPS MODEM IN THE DUST —CABLE MODEMS AND DSL ARE FINALLY HERE!

The Internet seems to be changing almost daily. That old 56-Kbps modem is just too slow and you want something faster. Analog phone lines just don't do it for you anymore. Well, you've come to the right place. We're going to talk about speed...high speed, that is.

Technology has opened up a wide variety of options. There are two technologies running the show right now: cable modems and DSL (digital subscriber lines). Both of these options are available for Mac users, and they're finally getting cheap enough for a reasonable person to afford, so it's time to explore them. If you're ready to hit the Internet at superhigh speeds, buckle that seatbelt and read on—you'll want to know all about big bandwidth before you hit the surf.

OTHER SPEEDY OPTIONS

ISDN

It costs too much, it's a pain to set up, and it's still a dial-up connection. Don't bother unless you can't get anything else.

Microwave

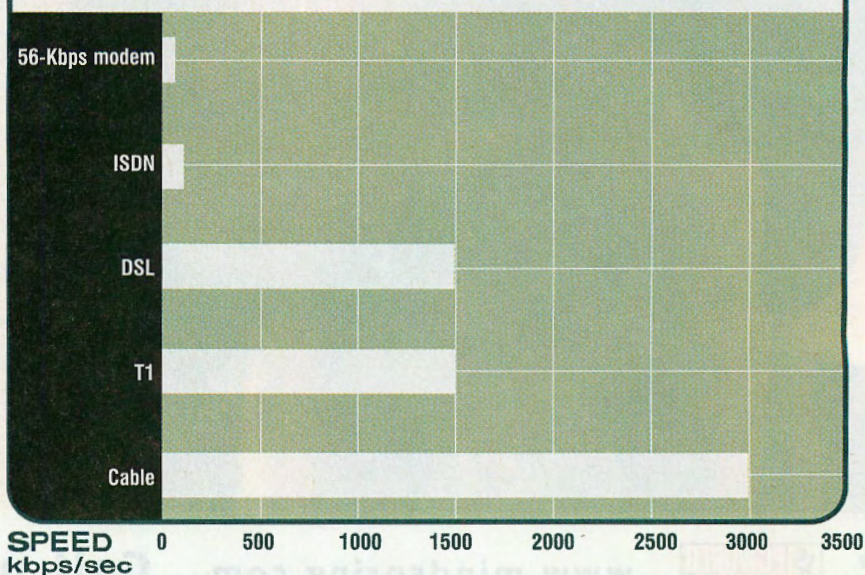
While wireless access is the way of the future, it isn't here yet. Some small market tests are happening, but this technology will take time.

Dual Modems

If you can't even get ISDN, see if your provider will let you dial-up twice. Using handy software like LinkUPPP! Turbo from FCR Software Inc. (<http://www.fcr.com/>), you can use two modems to double your speed online. Still not quite as fast or reliable as ISDN.

Fast, Faster, Fastest!

How fast is big bandwidth? Here's how the five most popular Internet access technologies stack up by download speeds (upload speeds are typically slower). We've used the highest speed connection generally available in each category—your mileage may vary, and faster flavors of cable modems and DSL are theoretically possible.



Cable Modems

Cable companies are good for more than Dukes of Hazzard reruns

What Is It?

A cable modem, as the name suggests, connects to the same coaxial cable that brings in your cable TV signal (probably the most widespread method of high-speed Internet access today). It's a little box with a network interface that routes traffic between your Mac and the cable network. Most cable modems use two channels within the cable connection to do Internet business—one for receiving data, the other for sending it. These channels don't take away from your viewing, however—you can watch TV and surf the Net simultaneously. The cable modem is a full-time, dedicated connection—no more busy signals—and can be fast (often faster than a T1, at least for downloading).

With most cable companies either in the process of or having finished the conversion to digital networks, cable modem access is relatively widespread. It was hard to believe Milo Medine, the father of TCP/IP, back in early 1998 when he said that cable modems would be available nationwide within a year, but it turns out he was just about right. They're not everywhere yet, but it's happening.

1 The cable comes into your house and splits, with one end going to your TV and the other to your Mac.

2 The cable modem does the work of converting the signal that travels to and from the cable TV network to an Ethernet stream.

3 Your Ethernet-capable Mac connects to the cable modem and can now fly around the Internet.

speed!

How Fast Is It?

This type of access can indeed breathe a healthy dose of life into your online experience. It's fast. Really fast. Most cable networks allow you to download data to your computer at speeds between 1000 and 7000 Kbps. (Remember—a T1 line tops out at 1500 Kbps). This means your download speeds for viewing Web pages and retrieving files will increase by a factor of 15 to 125 over a 56-Kbps modem. That's right—at least 15 times faster, maybe more.

Once you have this type of speed, you'll often find that your connection to the Internet is no longer the weakest link in the chain. Many times, the servers with which you connect will have slower connections than you have in your own home! The nice part is that this, too, will change, and we'll see Web sites increasing their bandwidth to continue serving customers as fast as they demand. Uploading speeds (that is, the speed at which you can send data) are typically lower than downloading speeds, but that's okay. Most home users tend to download a lot more than they upload, and with upload speeds ranging from 500 to 4000 Kbps (still potentially faster than a T1 line), it's still a welcome increase over that old analog modem. It's certainly fast enough for real-time videoconferencing, and it can make that Quake game really fly.

What Do You Need and What Will It Cost?

To access the Internet this way, you need to have an Ethernet port on your Mac and a cable modem. Most cable companies don't sell the modems; rather they lease them as part of the service. Prices for the total package typically average \$45 per month, which isn't bad when you add up the costs of analog access. A separate telephone line and an account with a dial-up ISP averages about \$35 per month, so for an extra \$10 you can get a dedicated connection with lots more speed. Startup costs, which often include an onsite technician to configure the service for you, run anywhere from \$50 to \$100.

What's the Catch?

Accessing the Internet via cable modem isn't without problems. Although the cable companies are used to providing dedicated access for cable television, most of them have no experience in being Internet service providers. This has left many early adopters around the country very frustrated. If you're used to dealing with a small, local dial-up Internet provider for your service, you'll notice a difference if you move to a cable modem. The cable companies are much larger than most ISPs, and slow to respond to customer needs. They are learning very quickly that just because they have the technology doesn't mean they know how to use it or how to tell you how to use it. Support problems plague many cable modem users around the country, as frustrated customers find their new toy doesn't work the way it should.

Can I Get It?

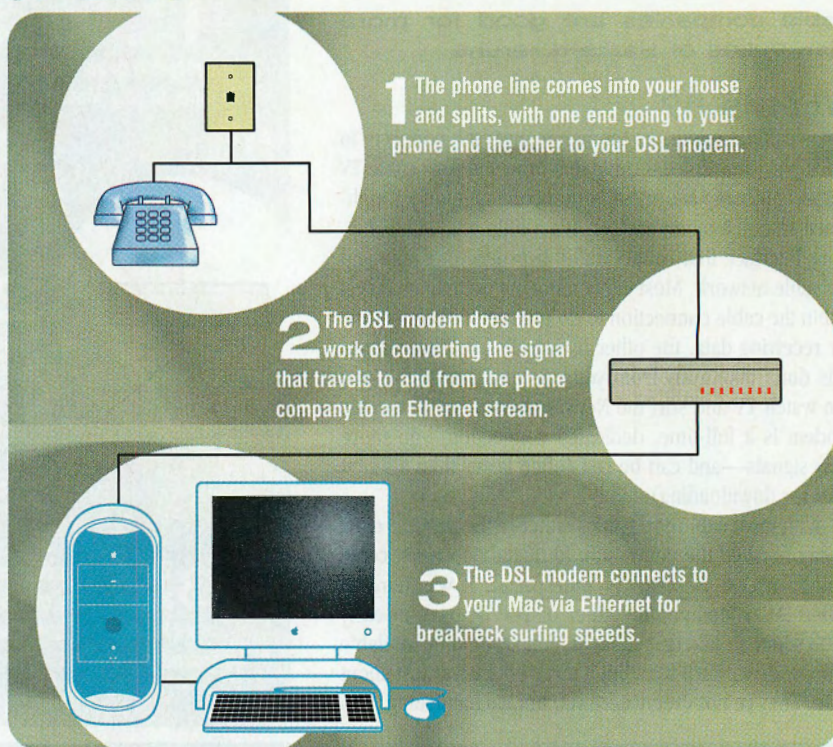
With both cable modems and DSL connections, availability is the big question. For cable modems, call your local cable company or go to its Web site, where you'll often find a search function to find out if cable modem service is available in your area. Two of the largest cable modem service providers are @Home (<http://www.home.net>) and RoadRunner (<http://www.rr.com/rdrun>). For a list of cable companies that plan to provide cable modem service go to <http://www.cablemodems.com/providers.shtml>.

Digital Subscriber Line

Cable Has Competition

What Is It?

The other currently popular method of high-speed Internet access, DSL, is available from your telephone company. Just like the cable modem that shares your cable with the TVs in your house, DSL shares your phone line with your telephone(s). Voice conversation only takes up a small portion of modern telephone lines, leaving a large part of the available bandwidth unused. DSL takes advantage of this unused bandwidth by splitting it off and using it for digital data transmission, or more specifically, Internet access. The nice part about it is that you don't need to run a separate phone line into your house, and you can use your DSL Internet access while you're talking on the telephone. Many different acronyms describe different flavors of DSL technology (ADSL, HDSL, and SDSL), so often people refer to it as just xDSL (techies tend to use the letter *x* as a variable that stands for just about anything).



How Fast Is It?

This type of service offers a huge speed increase over analog modem connections. DSL comes in tiered speed increments, but even at the lowest level, download speeds are at least six times faster than analog modems. Connections are also dedicated, which is more of a convenience than most people realize. With an analog modem, a quick check of your email requires that you wait through the whole dial-in process, praying to the busy-signal gods until you finally get on and see what's shown up in your mailbox. With dedicated access, there's no dial-up time and no busy signals. You tell your service to check, and seconds later you've got mail. In a world where time is so precious, that can mean a lot.

What's the Catch?

Even if you live in a city where DSL is available, it may not be available at your home. This technology hinges on your distance from the central telephone office. In most places, the maximum distance you can be from the phone company's central office and still qualify for a DSL connection is 18,000 feet. That's 18,000 feet of wire, mind you, which probably doesn't take a direct route. Wire tends to get wrapped back and forth on its way from the central office to your house, so you probably need to be even closer than that for it to work. Also—even if you are within that 18,000-foot limit—the further you are from the office, the slower your maximum connection will be. The signal degrades as it travels, and your speeds decrease right along with it.

What Do You Need and What Will It Cost?

The cost of DSL varies depending on the speeds you want and the companies involved. Basic DSL packages, which start with download speeds of 384 Kbps and upload speeds of 128 Kbps (this can go all the way to 1500 Kbps download and 384 Kbps upload), range anywhere from \$29 to \$150, depending on the speed level you want. Unlike the cable modem, DSL service is not typically billed as an all-in-one package. It's more like your analog modem access, in that you buy the DSL service as a feature from your telephone company, and then you need Internet access on top of that. Many phone companies, of course, offer Internet access as an additional feature, but be aware that the published cost of the line may not include Internet access. The upside? You get the flexibility of choosing an Internet service provider that suits your needs—you're not tied to one provider, as with a cable modem.

Startup costs are typically higher with DSL, since the pricing plans generally do not include the cost of the modem. Some phone companies will lease you the DSL modem, which is a nice option, but most require you to purchase it outright. The initial fees, which include onsite setup and the cost of the hardware, usually fall into the range of \$300 to \$500. However, many companies are offering substantial discounts in exchange for one- or two-year service contracts.

Can I Get It?

With DSL, you have more choices, but the place to start is by contacting your local phone company, either over the phone or on its Web site, to find out if DSL is available at your home—remember the short-distance rule. If you're not within a few miles of a properly equipped switching station, you're out of luck. You can also check out Dale Sorenson's Mac-friendly DSL list at <http://www.sorenson-usa.com/dsl-mac.html> for some other companies to check out. This list also includes several DSL ISPs (how's that for a bunch of three letter acronyms?).

So Which Should I Get?

For most people, the decision is easy to make: Take what you can get and like it! Most areas currently only have one type of high-speed access available, and many areas still have none. Nevertheless, if you are lucky enough to be in the position of choosing, consider these points before settling on a solution. We've provided a checklist for your convenience. Read through the items and select cable or DSL.

☐ Cable ☐ DSL

Bandwidth Crowding

Although cable and DSL are very similar, there are some inherent differences in network organization. With cable, everyone in your local neighborhood shares the bandwidth available to you. With DSL, the circuit you buy links you directly to your ISP. This may not seem like a big deal, but as more and more people get online, it's possible the cable network will slow down, even though the numbers say it's faster. This could be an issue for you, although the cable companies could restructure their networks on the fly by making the groups smaller and smaller (thereby limiting the number of people with whom you must share your bandwidth). Check with other people in your area using either service and get their opinions. Real-world customer testimonials are worth far more than the flyers you get from ISPs.

☐ Cable ☐ DSL

Startup Costs

With the rapid changes in technology today, you may find you want to change services often. If you've got hundreds of dollars invested in modems and startup costs, or if you're tied to a two-year service contract, making that move isn't all that easy. Leasing equipment from your ISP protects you against ending up owning a piece of outdated technology (you know, like one of those antique computers from 1995!). As technology changes, you'll want to keep pace with it, and that requires making constant changes.

☐ Cable ☐ DSL

Reliability

Consider service uptime and your reliance on Internet access. Both cable and DSL offer dedicated access, which means your computer is always online. However, cable and telephone networks are certainly not immune to service outages, so consider the past reliability of your regular service before making a decision. If your cable service goes out a few times a month, but the telephone's been up and running solidly for years, factor that into your decision-making process.

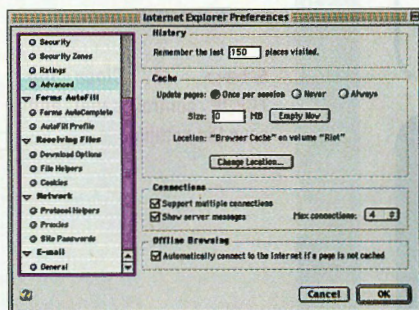
☐ Cable ☐ DSL

Reality Check

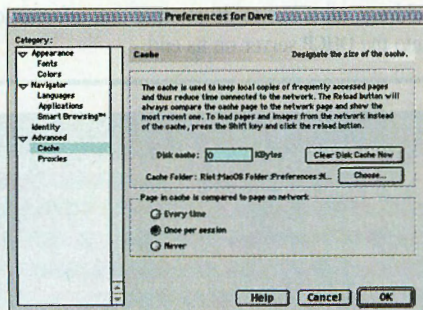
Lastly, make sure you realize with whom you're dealing here. Wide-spread dedicated Internet access is something new for everyone, after all, and the corporate infrastructure of your ISP can make a difference in the quality of your experience. While cable companies focus on dedicated access, telephone companies do not. Consider this: If everyone turned on their TV at the same time, there wouldn't be any problems. However, if everyone picked up their telephone at the same time to make an outgoing call, only about 40 percent of us would actually succeed—the rest would get stuck wading through all-too-familiar "all circuits are busy" messages.

Cacheless Access

Every major Web browser out there supports a disk cache. As your computer downloads Web pages for you to view, it saves the downloaded data to your hard disk. The next time you visit the same page, your system checks to see if you have the files on the hard disk before downloading them again. This makes perfect sense when you're connecting with an analog modem, and it speeds up the process. However, with high-speed connections (including cable, DSL, or the T1 at your office), it's often faster to turn the disk cache off and just let the computer download the data to memory. Because it doesn't have to save information to the hard disk, Web surfing can go *much* faster. We'll show you how to turn off the disk cache in Internet Explorer and Netscape Navigator.



IF YOU'RE USING A BROWSER from that company, you can turn off the cache by going to the Preferences panel, selecting Advanced (under the Web Browser item on the left), and entering 0 in the Size field.



NETSCAPE NAVIGATOR'S CACHE CONTROL is similar to Internet Explorer's. Open the Preferences panel and select Cache (under the Advanced item on the left), then enter 0 in the Disk Cache field. Click OK to finish.

speed!

How to Get It

Once you've decided which way to go, the setup procedures for both services are similar and relatively straightforward. First, call your cable or telephone company and set up an appointment. The service technician should arrive with all you'll need to get set up and running.

Thankfully, most Macs out there won't require any additional hardware to access this service (other than the modem for the connection). Both cable and DSL modems connect to your Mac's 10BaseT Ethernet interface (the one that looks like a wide phone jack). Some older Macs with built-in Ethernet require an adapter to make this work properly. If you have a Mac that lacks Ethernet ports, many options (such as PCI or NuBus cards) from third-party manufacturers can get you up to speed. Once you've got a 10BaseT Ethernet interface available on your Macintosh, setup is fairly simple. In most instances, the technician will get you up and running quickly.

Like all computers on the Internet, your Mac gets assigned an Internet Protocol (IP) address. This address is unique to your computer and is required to participate in any traffic over the Internet. There are two ways to obtain an IP address. Some services assign static, permanent IP addresses to each customer at the time of setup. If this is the case, you'll insert a series of numbers and addresses into your TCP/IP control panel when you set things up. As long as your cable company doesn't change any of these addresses, you're all set. Other companies set up a server to assign IP information as customers turn on their computers. This is done via Dynamic Host Configuration Protocol (DHCP). This makes things easier on the user—you don't have to remember *any* numbers. All you do is set your TCP/IP control panel to obtain its settings from DHCP, and you're done (see "Setting Your TCP/IP Control Panel" for details). If your ISP decides it needs to change an address, all it has to do is enter that information into the DHCP server on its end.

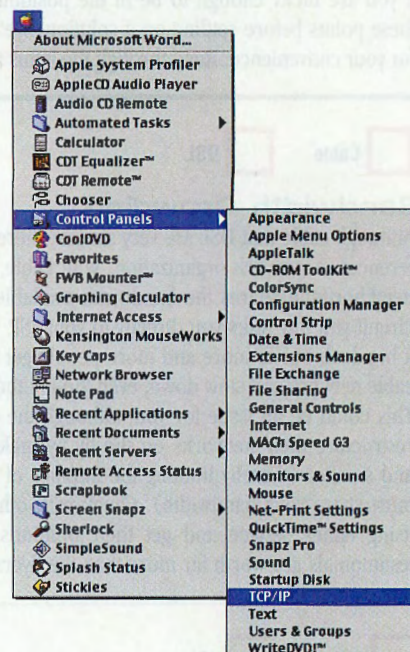
Mac OS 8.5.x has a very specific problem with DHCP servers, and we highly recommend that you upgrade to Mac OS 8.6 if you use DHCP for Internet access. Previous system versions don't have this problem, so users of 8.0 or 8.1 (or 7.x, for that matter) don't have to worry.

Once you've connected the modem from your Mac's Ethernet port to the jack on the wall, and you've got your TCP/IP settings right, you're good to go. Fire up your favorite Web browser and go to town. If this is the first time you've surfed on anything faster than an analog modem, you're in for a real treat! Now all you have to do is remember to get up from the computer to eat and socialize with your family!

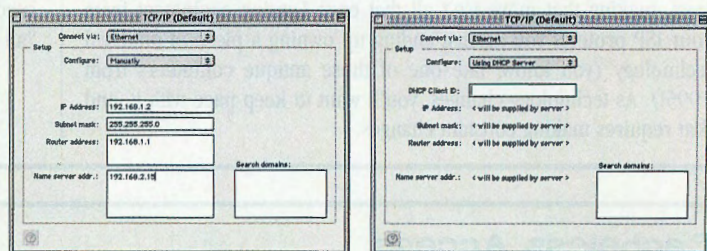
Setting Your TCP/IP Control Panel

You'll configure your Mac for Internet access via the TCP/IP control panel, which is part of the Mac OS.

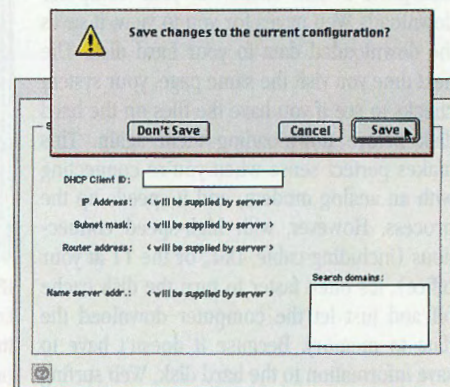
Step 1. Open the TCP/IP control panel in the Apple Menu under Control Panels.



Step 2. Choose Connect Via Ethernet, and Configure Manually or DHCP, depending on your ISP's setup instructions. If you choose Manual, make sure to enter all the relevant information here such as your IP address and name server address (this changes with each provider).



Step 3. Close the TCP/IP control panel and save the settings.



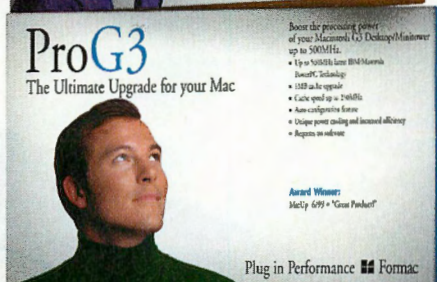
Dave Hamilton is a consultant who spends his free time converting Windows users to the Mac. You can read his weekly question-and-answer column, *Ask Dave*, at <http://www.macobserver.com>.

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The Fastest Graphic Accelerator for your Mac will turn any PCI Mac into a lightning fast 2D and 3D graphics workstation.

ProG3
The Ultimate Processor Upgrade for your Mac can boost the processing power of any Macintosh G3 up to 500MHz - at a fraction of the cost of a new system.



ProRAID
This SCSI Accelerator Kit is the ultimate I/O solution to optimize high-speed data transfer between your Mac and SCSI peripherals up to 80MB/s data transfer rate.

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Turn your Mac into a full function TV/VCR that can capture still frames and full motion video.



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brawl

BROWSER BRAWL

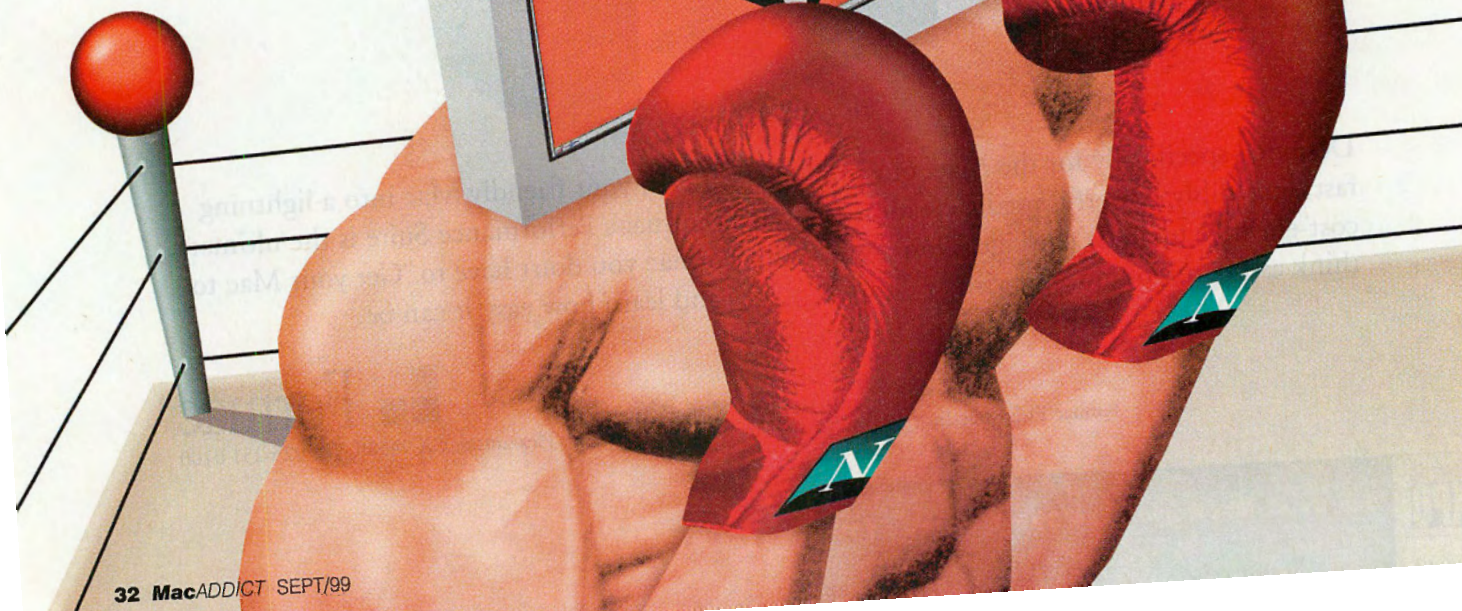
by Kevin Savetz
Illustration by John Ueland

NETSCAPE COMMUNICATOR 4.6

- Weighing in at 25.62 megabytes (installed)
- Time to download: 43 minutes at 56 Kbps (installer download size: 13.79MB)
- System requirements: PowerPC processor running Mac OS 7.6.1 or above
- Minimum RAM: 16MB physical RAM for Mac OS 7.6.1, 24MB for Mac OS 8.0 or greater



FIND BOTH
OF THESE
big, bad
browsers on
The Disc.



Ladies and gentlemen, tonight, in an exhibition fight for your entertainment, you will witness a rare match between two undisputed heavyweights—and the biggest browsing competitors—Netscape Communicator and Microsoft Internet Explorer. This brawl is about strength, speed and style, and will take place in four rounds: portals, email, and speed, followed by a bonus round on special features."

MICROSOFT INTERNET EXPLORER 4.5 with OUTLOOK EXPRESS 4.5

- Weighing in at 12.02 megabytes (installed)
- Time to download: 27 minutes at 56 Kbps (installer download size: 8.49MB)
- System requirements:
PowerPC processor running Mac OS 7.5.3 or above (7.5.5 or higher recommended)
- Minimum RAM: 8MB (with Virtual Memory on) or 12MB physical RAM



ROUND

1

the portals



NETSCAPE COMMUNICATOR: MY NETSCAPE

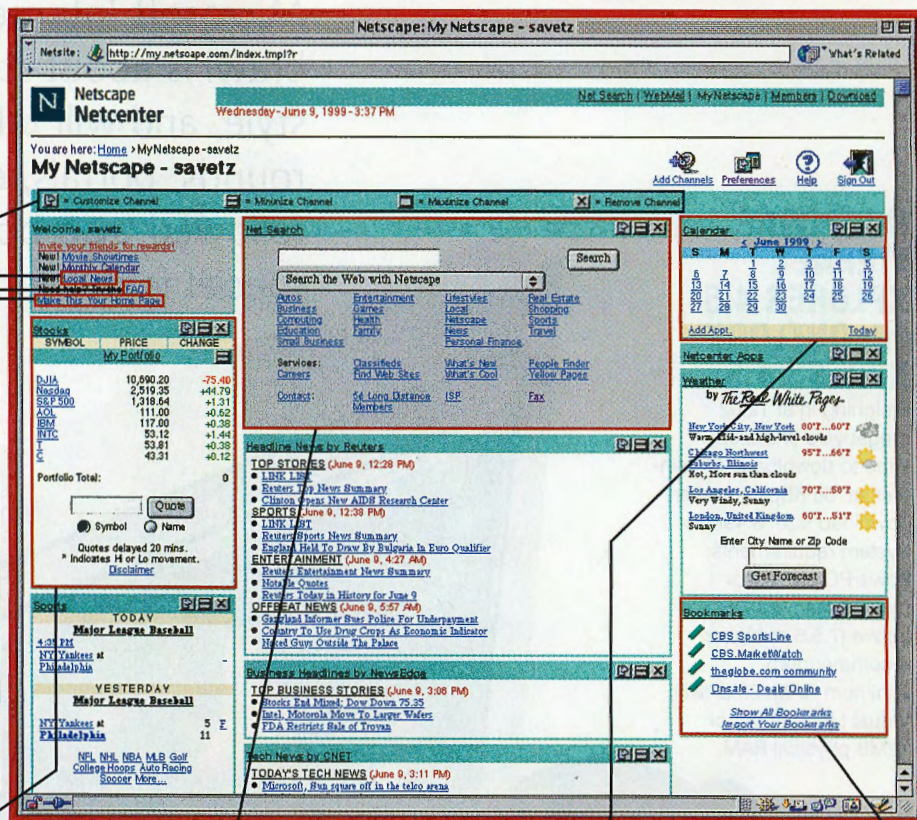
My Netscape page provides "channels" such as headline news, stock quotes, sports scores and a weather summary. You can collapse or expand channels individually. Cool, except for the Windows-like icons.

Tell it your ZIP code and My Netscape will serve up local news—sort of. I'm treated to news from San Francisco, which is about 350 miles from my home. If you live in a big city, however, you can get truly local news.

We were going to complain about the page's bland mint-and-white color scheme, but Netscape read our minds and added a "customize your colors" option. You can pick custom colors or choose from a variety of prefab color schemes.

Extensive personalization options allow you to add or remove information from the home page: you might remove the horoscopes and sports scores in favor of a local event listing and calculator. Then tell it what types of headlines you want to see and which stocks you want to track.

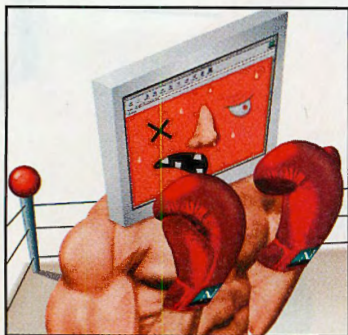
Market watchers will enjoy the My Portfolio channel. Tell it what stocks you own and how many shares, then My Netscape will show your daily profit or loss. Nosy shoulder-surfers will be astounded by your net worth. A few clicks away, Netscape provides real-time stock quotes.



The search window provides centralized access to many of the major search engines. Some favorites, however, like Hotbot, AltaVista and Yahoo, are conspicuously missing.

The calendar function allows you to track appointments, birthdays, and reminders. You can also have it automatically list events that match your interests, such as sports, movies, concerts, and trade shows. A click switches the small full-month window to a full-screen, by-the-hour appointment scheduler.

The "bookmarks" channel allows you to import up to 100 bookmarks from your Web browser to the My Netscape page. You can then access those bookmarks from any computer on the Web—a plausibly useful function for road warriors.

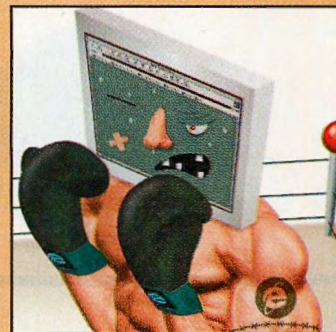


COMMUNICATOR



Your home page is where you hang your hat—and many of us choose to call one of the myriad “portals” home because they’re convenient, centralized starting points. Among your choices are Snap!, Go, GoTo and other sites with short, catchy names. Of course, the browser makers would prefer you stuck with their portal.

Netscape’s portal is called My Netscape—the URL is (rather predictably) <http://my.netscape.com>. Microsoft’s portal, whose charming six-syllable name, “MSN.com Home”, doesn’t exactly roll off the tongue, is at <http://home.microsoft.com>.



brawl!

INTERNET EXPLORER: MSN.COM HOME

The screenshot shows the MSN.COM Home page in Internet Explorer. The browser's address bar displays <http://home.microsoft.com/>. The page has a blue header with the MSN logo and navigation links. A search bar is prominently displayed. Below the search bar, there are several sections: 'do it here!' with links to various services, 'news' with headlines, 'stock quotes' with a table of stock prices, and 'moneycentral' with financial news. The page is cluttered with many links and advertisements.

Last year, MSN.com was launched under the moniker “Start.com”. Now, Microsoft’s portal shares the name of its all-but-forgotten, Windows-only online service.

Personalize the page ‘til you drop: you can choose from an impressive mix of news, weather, and sports sources, as well as stocks, travel sites, media clips, and other goodies. There’s only minimal control over the page layout, though.

The Web Directory provides daily site picks, access to search tools (again, some of the best are absent. Why is HotBot, <http://www.hotbot.com>, always the odd man out?), and a browsable directory.

Like My Netscape, you can add your favorite Web links to your MSN.com home page. This works especially well if you like only four Web sites, because that’s all it will let you add.

The site does offer a lot of great content, from CNET and Wired, Forbes and Fortune, TV Guide and MTV. Too bad there’s no way to organize it.

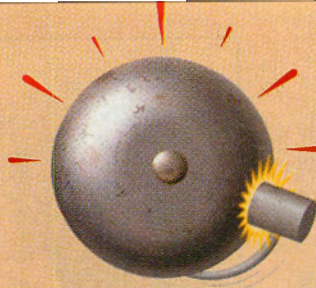
(Not Pictured)

Microsoft also provides a site just for Mac users: Microsoft Mactopia, at <http://www.microsoft.com/mac/>. It features Mac-related news headlines from Apple, CNET, TidBITS, and other sources—some fresh, some stale. See this month’s Editor’s Note.

MSN.com Home offers a lot of pertinent information—you can check your free Web-based email account, see the local weather report, and find Web sites—but it doesn’t organize it all as well as My Netscape can.

Watch out—along with the good stuff, the portal is laden with ads for Microsoft products, news about Microsoft products, and articles about Microsoft software. Yes, it’s what you would expect, but enough is enough.

THE WINNER: Netscape. Although both sites offer access to copious amounts of information, My Netscape’s interface is superior—and offers extras (like the calendar) lacking at MSN.



ROUND mail

2

What would a browser be without email? Communicator's built-in client is called Messenger; Microsoft's email tool is called Outlook Express and is a separate program from Explorer. We looked at three key features of each.

Both programs do a marvelous job of showing and

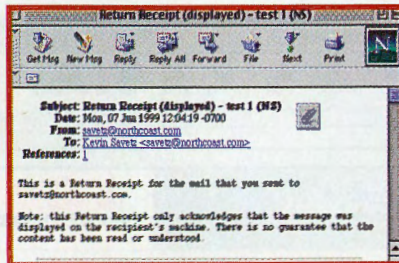
sending HTML email, replete with graphics, hyperlinks and fonts. Remember, though, that text-only email is not dead. There are still many email programs that can't show email encoded with HTML, so be careful not to send HTML email unless you know the recipient uses a compatible mail client.

COMMUNICATOR



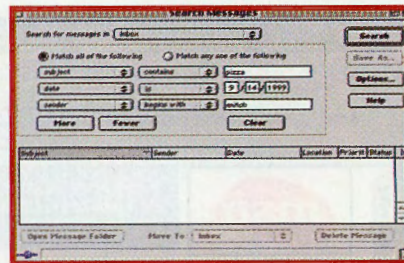
MESSENGER ENCRYPTION AND DIGITAL SIGNATURES

It's easy to keep love letters and business notes secret using Messenger, which is integrated with Verisign's digital certificate system. Shell out a mere \$10 a year for your own certificate and you can send encrypted email to users of compatible software. (Messenger decrypts the mail for valid recipients, too.)



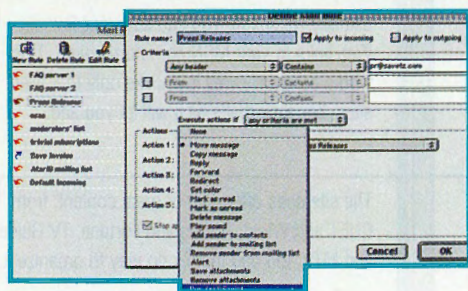
RETURN RECEIPT

When it absolutely, positively must get there, Netscape gives you a return receipt. By enabling this handy feature when you send an email, you'll be informed when the message is delivered to the recipient's mail server. If the recipient uses a compatible mail program, you can also be notified when the recipient actually views the message.



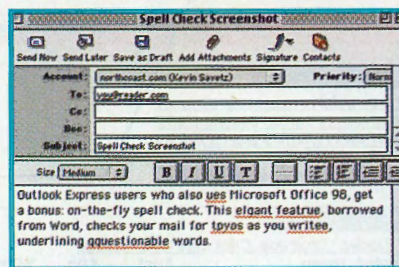
POWERFUL SEARCH

If you get a lot of mail, finding a particular message amongst hundreds (or thousands!) of disorganized missives can be a daunting task. Outlook Express's find function is good, but Communicator's is better. It lets you perform complex searches, seeking out particular message headers, body text, or date.



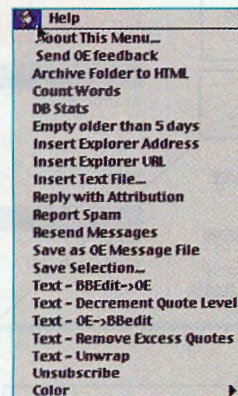
OUTLOOK EXPRESS KILLER FILTERS

Netscape's Messenger has mail filters, too, but OE's pulls out all the stops. The program automatically forwards or replies to messages meeting certain criteria. It can process file attachments or add the message's sender to your contact list. Like Messenger, Outlook Express is also a newsgroup reader—unlike Messenger, you can apply rules to newsgroup posts.



INTEGRATION WITH OFFICE 98

Outlook Express users, who also use Microsoft Office 98, get a bonus: on-the-fly spell check. This elegant feature, borrowed from Word, checks your mail for typos as you write by underlining questionable words. You can also access your Outlook Express contacts list from other Microsoft applications, and even do email merges.



IT'S SCRIPTABLE

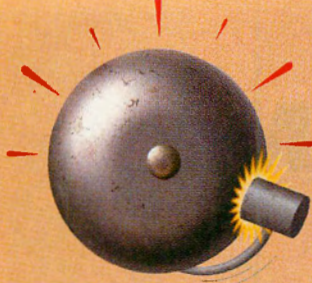
Kudos go to Microsoft for integrating AppleScript into Outlook Express. Folks can extend the capabilities of the program by writing scripts. These handy add-ons can be used to

archive your email, report spam, quickly unsubscribe you from a tiresome mailing list, and more. A bevy of ready-to-use scripts are available at the Unofficial Outlook Express Web page: <http://www.macemail.com/oe/pages/applescript.shtml>.

INTERNET EXPLORER



THE WINNER: Outlook Express. Besides the features listed above, OE supports multiple email accounts, multiple signatures (handy if you need several ways to end your messages), and the IMAP mail protocol (a great way to share one email account between two computers).



ROUND speed

3

brawl

So, your browser can proofread your email, mix drinks, and clean the cat's litterbox? None of that matters if it can't show you a Web page, and quickly. So round three of our little battle is devoted to speed. The question: how fast could each browser download and display 30 Web pages?

We used both browsers to visit a variety of popular home pages, like amazon.com, snap.com, and apple.com. To be fair, we set the disk cache on both browsers to 5MB and then emptied them. No matter which browser you use, some careful choices in the Preferences window can keep things running at top speeds. Choose Preferences from either browser's Edit menu to get at it.

In Internet Explorer, judicious choices in the Web Content prefs panel can help speed things along at the expense of multimedia sexiness. For instance, you can choose whether pictures should be displayed "faster" or "better"—that is, whether IE should sacrifice image quality for speed. Go ahead, make the sacrifice. (You can also disable images entirely.) IE also lets you disable video, sound, and plug-ins, which will speed some sites up considerably. You can even disable Java in IE's Java preferences

panel and save time by not downloading those fat applets.

In Communicator, similar preferences are in the Advanced prefs panel—again, disabling Java and images will speed up your surfing. (For our tests, we opted for the full multimedia experience in both browsers: pictures, sounds, Java—we wanted it all.)

Finally, for speed boosts in both browsers, you should keep your cache at a minimum of 4MB, although bigger is better—to a point. Don't waste drive space on more than 10MB of cache.

So, how did the browsers fare? Our testing was done on one computer, a PowerMac 7200. We surfed at different times of the day using our beloved cable modem—the ISP was Northcoast Internet, based in Eureka, California. For Netscape Communicator, the total time to download and display 30 Web pages was 7 minutes and 15 seconds. IE finished the race at a slug's pace of 11 minutes and 15 seconds. There's four minutes of life that could have been better spent. Using the browsers back to back, the speed difference is palpable—one thinks twice before clicking on a link in IE, wondering if it will be worth the wait.

OTHER CONTENDERS

Internet Explorer and Netscape Communicator may be the best-known browsers, but they aren't your only choices. A variety of flyweight contenders are waiting in the wings, hoping to spar with the big boys. Try out these browsers if your Mac doesn't have enough RAM or disk space to run the Big Two, or if you simply think different.

ICAB

The new kid in town is iCab, a sweet little browser from Germany.



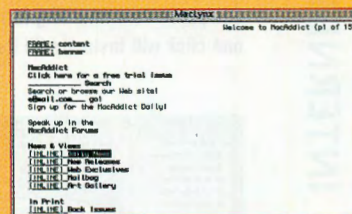
iCab doesn't have the hefty system requirements of the big boys' browsers. Versions are available for PowerPC and 68K Macs—as long as you have System 7.5 or above and 4MB of free RAM, you're good to go.

It's very fast, and surprisingly feature-laden, given its svelte size. It supports HTML 4, cookies and cookie filtering, frames and bookmarks, and a lot of other features you might not expect in such a tiny browser. The PowerPC version supports Java, but the 68K version does not. The program is still in beta—the current version doesn't yet support JavaScript or Cascading Style Sheets Level 2, although those features are planned.

During the beta test period, iCab is free. Afterwards, the full version will cost \$29. A free "lite" version will also be available. Download iCab at <http://www.icab.de/>.

LYNX

Lynx doesn't do graphics. At all. This accounts for its small memory and disk space needs: it fits on a floppy disk and



only needs one megabyte of free RAM. Lynx may not be the prettiest browser, but it will get your aging PowerBook on the Web without complaints.

Not having to load graphics from Web servers makes browsing the Web with Lynx very fast, even over a slow modem. Lynx loads quickly and displays pages quickly. It doesn't have the overhead of code to show graphics or Java applets. It doesn't play MIDI music, have a built-in HTML editor, or support plug-ins.

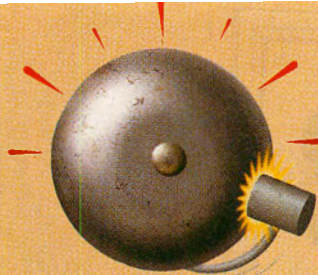
It does what's important, though: Lynx's features include bookmarks, frames, forms, cookies, proxies, and security for handling credit card transactions. MacLynx is free: you can download it from <http://www.lirmm.fr/~gutkneco/maclynx/>.

COMMUNICATOR



WEB SITES TESTED:

www.abc.com	www.humboldt.edu
www.altavista.com	www.ibm.com
www.amazon.com	www.landsend.com
www.aol.com	www.macaddict.com
www.apple.com	www.marketwatch.com
www.butterball.com	www.microsoft.com
www.cbs.com	www.mtv.com
www.cnet.com	www.nbc.com
www.ctw.org	www.netscape.com
www.deja.com	www.pbs.org
www.ebay.com	www.remarq.com
www.eff.org	www.shockrave.com
www.excite.com	www.snap.com
www.go.com	www.swatch.com
www.hotbot.com	www.webmonkey.com



FINAL ROUND

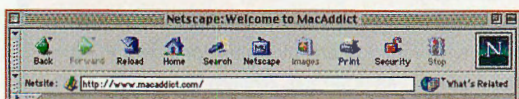
Some of the best goodies don't fit neatly into any category—so for this round, we've highlighted the best features unique to each browser.

brawl

COMMUNICATOR

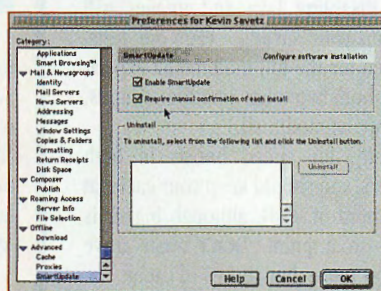
CLEAN INTERFACE

Communicator's simple interface is appealing. The buttons are in places that make sense, and don't eat up too much valuable surfing space. Compare that with Explorer's litany of buttons and tabs, along with the panels that appear and disappear. You can call us purists, but a simpler interface is a better interface, and Communicator has it.



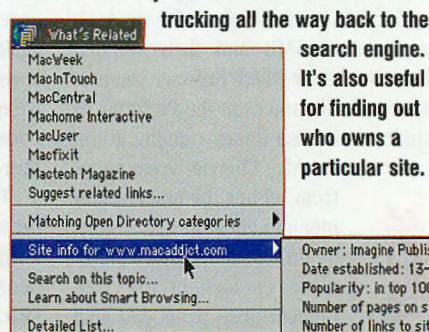
SMARTUPDATE

Netscape makes upgrades painless with SmartUpdate. When a new version of Communicator is released, SmartUpdate will notify you, then (with your permission) fetch and install the patch. You won't have to wait for eons while downloading the new version—SmartUpdate only downloads the new parts of the program. It works with plug-ins, too.



SMART BROWSING

Netscape Communicator's "What's Related" button searches out sites that are similar to the Web page you're currently looking at. You can use it as a research tool, or simply as a fun way to learn about sites that might interest you. Once you've found one site of interest, Smart Browsing can be a fast way to find related sites without



trucking all the way back to the search engine. It's also useful for finding out who owns a particular site.

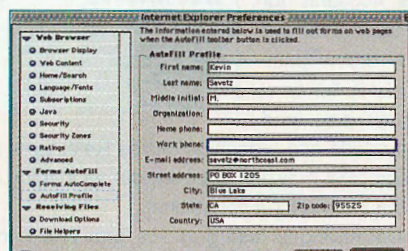
INTERNET EXPLORER



THE WINNER: It's a close call, because both browsers offer interesting features lacking in the other. The TKO goes to Explorer, though, for its time-saving installer and form-filling functions.

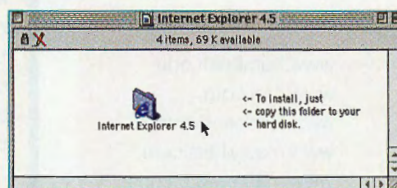
FORMS AUTOFILL

What a time-saver: feed IE your name, address, phone number and other personal information once. Then, the next time a Web site presents a daunting form full of questions, one click will instantly fill it out.



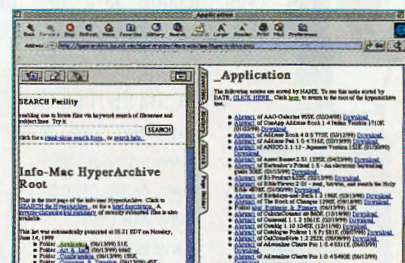
INSTALLER

Installing IE is so easy we just had to mention it. There's no fussy installer, and no need to reboot. Instead, when you download IE, you get a virtual "SMI" disk. Just drag a folder from it to your hard drive, and you're done. IE's installer is much smaller than Netscape's, in part because it's not weighted with unnecessary add-ons like AOL Instant Messenger and Internet Config.



PAGE HOLDER

You've found a great Web page with a motherload of outbound links. Now what? Try using IE's Page Holder feature, which keeps the links page on screen. Linked pages appear in another panel to the side, but the page of links never disappears. It's so handy.



Referee's Decision

The winner is Netscape Communicator; its elegant interface and relative speed give it the edge against Internet Explorer. At least, for now.



Microsoft is al-

ready beta-testing the Windows version of Internet Explorer 5. If the Mac version has parity (a big if), we can look forward to more automated features, a "related links" function, a built-in streaming audio player, and "Web accessories" to customize the interface.

Version 5 of Communicator

hasn't been announced yet. But it will be the first major release since Netscape made the browser's source code available to the public (at <http://www.mozilla.org>). Who knows? Communicator version 5 may include a variety of fascinating additions developed by the Internet community—the users themselves.

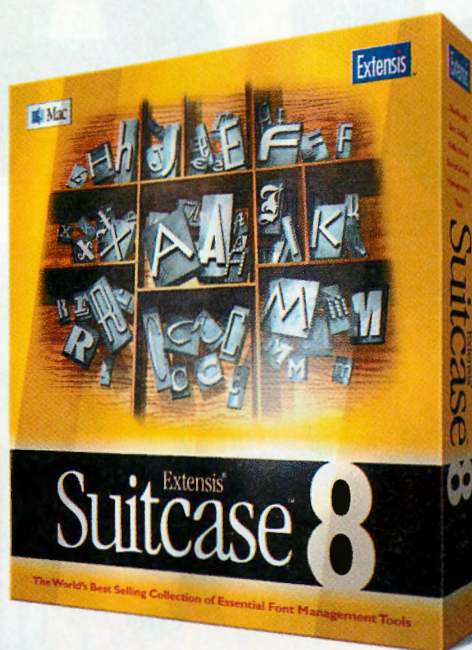
Kevin Savetz (savetz@north-coast.com) writes about Macs and the Internet for Computer Shopper and other magazines. An avid collector of vintage computers, Kevin is as likely to be playing with an Atari 800 or Timex-Sinclair as with his Mac.

Now Suitcase[™] 8 comes with all sorts of new features

(Including the logo in the corner of this ad)

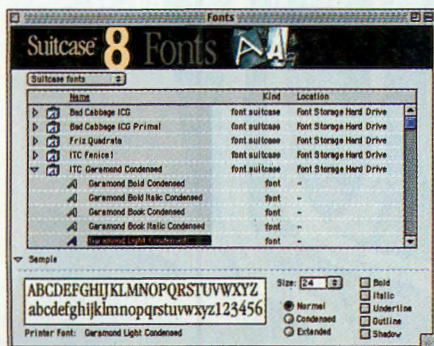


8.5
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SUMANA010399



MacAddict

free!

Free For All!

BY THE MACADDICT STAFF ILLUSTRATION BY ANDREW SKWISH



Although the Internet has made many folks rich beyond their wildest computer-generated dreams, we realize there are still quite a few Mac addicts who must scramble for the change to buy a mere packet of beef seasonings. We find this situation intolerable. As a service to the many millions who have yet to make millions by going public with overvalued Web sites, we've compiled our not-quite-annual *MacAddict Free-for-All*.

Inspired by our own lack of funds, we scrounged the Web for free goods and services ranging from guitar picks to Bibles to complimentary wake-up calls. Unfortunately, we only have space to list a small sample of the samples freely available on the Web. And we fear that by the time you read this, many of these offers may no longer be available, due to the daily evolution of most Web sites. If you can't get your hands on our Web-based booty (oh, behave!), fear not. We'll give you a list of cool sites that will have you hauling in the free stuff in no time.

Ricky Martin Photos

<http://www.rickymartinmanagement.com>



Aaaahhh! It's a Riicky Marrttiin fan site!!! Stop by the official Ricky Martin Web site for all the news, history, and musical accomplishments of the former Menudo member turned modern-day superstar, or just stare longingly at the free photos you'll get if you join the fan club.

Strobe Light

<http://www.operationstrobe.com>

Spread the word and get a free strobe light via Operation Strobe Light and the Help Us Help You nonprofit organization. The idea is to use your free strobe light to show the way to emergency response personnel in the event of an emergency. The catch here is that a volunteer will come out to your house to give you the light and provide you with other potentially life-saving information.

Wake-Up Calls

<http://www.mrwakeup.com>

Awake to the sweet sound of your own voice with Mr. Wake-up's free reminder service. You can schedule reminders via the Web site and it'll either email you or call you over the phone with your own prerecorded voice message. Every call and reminder includes your local time, date, and weather, but you can also sign up for daily doses of your horoscope, local news, entertainment listings, and motivational affirmations.



Buttons

<http://members.aol.com/buttonlady/index.html>



Here's your chance to show some attitude! The Button Lady offers wearable attitudes in a variety of sayings for free. Choose from an assortment of buttons including these gems: "If you don't like my attitude, quit talking to me!", "If I promise to miss you, will you please go away???", and "Where the hell was I last night?"

Resume Help

<http://www.bakosgroup.com>

Bankos is a career management mumbo-jumbo type of organization that probably

The Fine Print

Before you sign up for truckloads of glittering no-cost samples and services, you should be aware of their hidden hazards. So break out your magnifying glass—we've got a few words of wisdom to impart.

- Shipping fees can sometimes cost more than the product is worth. If that's the case, don't bother.
- Search for free stuff using an alternative email account you can easily cancel when you start getting swamped with spam.
- Beware the bait-and-switch offer that gives you a "free" gift, subscription, or service you have to either cancel or pay for later.
- Don't sign up for free stuff if you easily succumb to junk mail rage.
- Don't be a sellout. Some companies exchange free stuff for dirt on your friends so they can include people on their mailing lists and send them piles of unwanted product information. Don't do it.
- Some products may take weeks to arrive. Some may not arrive at all. If you really need that sample roll of Charmin right away, we suggest you just go out and buy it.

Gateways to a Free Tomorrow

Now that you've got the itch for freebies, give it a good scratch by checking out the following Web portals. We've picked the top five most likely to link you to every type of giveaway, contest, or coupon on the Net.

1. Totally Free Stuff
(<http://www.totallyfreestuff.com>)
2. Free Site X
(<http://www.freesitex.com>)
3. No Junk Free Stuff
(<http://www.nojunkfree.com>)
4. FreeShop
(<http://www.freeshop.com>)
5. Free-Stuff
(<http://www.free-stuff.com>)

free!

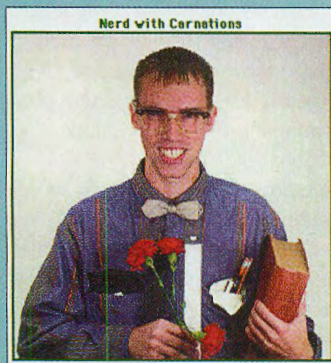
Free Love

We get lots of letters from readers who believe that some remote part of our job description includes finding dates for them. Yeah, right. Cupid we ain't, but we can offer Web links to free products that should put you on the path to ending your single status.

Get a Clue

What are the do's and don'ts of dating? If you're new to the relationship realm, or perhaps jumping back in the saddle, this book may help. Get a copy of *Straight from the Heart*, a \$12.95 value, absolutely free by visiting the Together Dating Web site (<http://www.togetherdating.com/guide-book.htm>). Armed with your literary criteria, take the plunge and get a date!

Spring for Some Flowers



How? Try sending flowers—the virtual (unscented) kind. You have richness in your heart, but a hole in your pocketbook. Not to worry...all you thrifty Romeos can send your Juliets (and vice versa) a dozen long-stemmed roses free. The Virtual Florist (<http://www.virtualflorist.com>) offers a variety of virtual floral arrangements, balloons, greetings, personalized songs, and more that you can send electronically to the object of your affection. There's even a bouquet tailor-made for those of you who are in the doghouse. If you find yourself there, better reread your dating guidebook.

Brush for the Occasion

This is the all-important step to any successful date—in a word, hygiene. Stock up on free Keri body wash and lotion (<http://womenslink.bristol-myers.ca/wlink-canada/kerioffer2.html>) just for the asking. Or if body wash sounds too feminine for you manly men, try a free bar of Bare Botanicals soap ([\[ca.com/ha/guest_book/gb_new.htm\]\(http://ca.com/ha/guest_book/gb_new.htm\)\) or splash on a sample of Stetson Country Cologne \(\[http://www.stetsoncountry.com/sweeps/form_index.html\]\(http://www.stetsoncountry.com/sweeps/form_index.html\)\). For you less mature types, complimentary Nick-elodeon and Rugrats toothbrushes are available from Oral B \(<http://www.oralb.com/pro/samples/index.htm>\).](http://shop.holisticameri-</p>
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Dress for the Occasion

You're hip on dating tips, you've scored a date, you sent flowers—so what's next? How about upping your cool quotient? Rebuild California (<http://www.rebuildca.org/freebies.htm>) is offering free pairs of sunglasses. Score a pair today!

You Gotta Eat

If dinner out is beyond your financial scope, how about dinner in? Cook up some French couscous from Royal Duchess (<http://www.royalduchess.com/sample.html>). Afterward, serve a cup of fresh-brewed coffee with chocolate-flavored cream provided by International Mixes (<http://www.mochamagic.com/Order.html>). We recommend you save your Fesperman's Beef Jerky (<http://www.onejerky.com/sample.htm>) for a night with the boys.

Care for a Nightcap?



If you got this far, we applaud you (cheap-skate!). Continuing with your night of free festivities, it's time to create a little mood music. Just slap in your "MTV's Fight for Your Rights" CD (http://mtv.com/mtv/tubes-can/fight4_right/ffyr.cd) and let the music move ya. We won't backseat-drive the rest of your date, but we'll give you links to a couple of necessary precautions—Trojan Condoms (<http://www.loveandsex.com/sample/index.html?stuff=trojan/product>) and Durex Condoms (<http://www.durex.com/lounge/usa/free.html>) also provide free samples.

Wait a Minute!

Before you commit, make sure you're compatible. Is your date a Mac addict? If not, convince your loved one to switch teams by getting him or her a magazine and CD for free (<http://www.macaddict.com> for a trial subscription). 'Nuff said.

offers really useful things to really corporate people. It's dull as hell, but if you fax Bankos your resume or copy and paste it to a form on the Web page, Bankos calls and gives you a free critique. The catch is that Banko feeds you into its head-hunting database, so prospective employers might start offering you large amounts of money to do what you said you wanted to do on your resume. Doesn't sound so bad to us.

T-Shirt

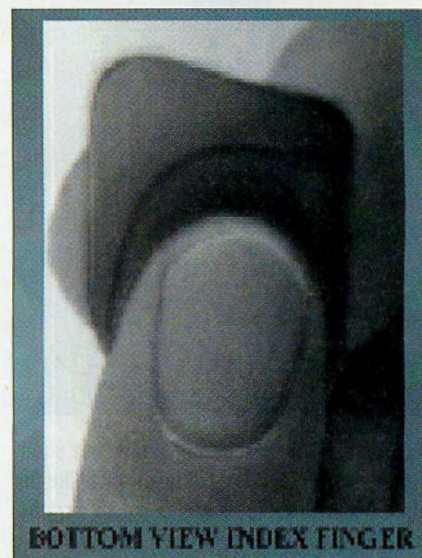
<http://www.petrix.com/shirt/items.htm>

Tired of companies ripping the shirt right off your back? Here's a company willing to put one right back on yours. The T-Shirt Outlet will send you a free T-shirt of your choice from its huge stockpile. The designs change constantly—but the offer doesn't.



Guitar Pick

<http://www.bigrockeng.com/bigrock.htm>



Calling all you guitar gods and guitar god wannabes! Head to Big Rock Engineering and pick up its latest F-1 Lead Model flat pick for free. Select your gauge and break out your axe...or your air guitar. Guitar picks also make great fingernail cleaners, screwdrivers, and percussion sounds in your vacuum cleaner—just in case you wanted to know.

Spade L Ranch Seasonings

<http://www.spadelranch.com>

Now *here's* a freebie that's good for the rest of summer—all the way through those Labor Day barbecues. It's a free 1.5-ounce sample of

Spade L Ranch Beef Marinade and Seasoning, and it's yours for a mere double-stamped, self-addressed envelope. The site also includes a wealth of recipes for your seasoning sample, including "good" ribs. Mmm, mmm!

Eyeglass Cleaning Cloth

<http://www.intersights.com/contest.htm>

For those of us who wear eyeglasses—and we know that many of you have ruined your eyes by sitting too close to the television—Inter-sights is offering a free eyeglass cleaning cloth made of specially treated microfibers. Just fill out a simple online form and it's yours.

Credit Report

<http://www.consumerinfo.com>

Credit reports are cool. You get to see all the times you missed payments, bounced checks, or went bankrupt, plus you can take a look at all your aliases. The catch here is that you also get signed up for a (cancellable) membership to the CreditCheck Monitoring Service, which after the first 30 days will run you \$60 a year. You also have to give up a whole lot of personal info, including your birth date, social security number, and a credit card number.

Photo Scanning Service

<http://hometown.aol.com/mkozanevic/scan.html>

Just mail Sara Kyde your favorite pics and she'll scan them in at resolutions up to 1200 dots per inch, then email them back to you—absolutely free. She promises a quick turn around and hasn't yet set any limits on the number of photos you can send. Sounds a little freaky, so hang onto the negatives.

Honduran Coffee

<http://www.hondurcom.com/free>

At the Honduras Net online mall, you can order all manner of common Central American goodies—cigars, woodcrafts, art, coffee, and the like. To entice you further, the site offers a free sample of 100 percent pure Honduran coffee. The bad news is that in this case free isn't really free. Honduras Net wants \$2.99 for shipping and handling, and for this it wants a credit card.



CGI and Perl Scripts

<http://www.worldwidemart.com/scripts>

Adding a simple form to your Web site should be...uh, simple. It's not. Creating a little series

of slots where users can fill in the blanks and send info back to you requires genuine scripting capability. Luckily, places like Matt's Script Archive give novice site builders the code required to create guest books, simple searches, counters, and Web discussion boards—all free.

Stampe's Stoplik

<http://www.stoplick.com/offer.html>

As the Web site says—perhaps a *bit* dramatically—you can use Stampe's Stoplik to save your dog from a death sentence caused by overlicking a wound that won't heal. Get your free sample of this healing product by sending in a picture of your dog's wound, its history, and the products you've tried.



PROBLEM SOLVED

The New Testament

<http://home1.gte.net/brm1/bible.htm>

The best-selling book of all time can be yours free if you can meet the Bible Reading Ministry's requirements: You must not already own a copy of the Bible, you must be willing to read your free copy, and you must be requesting it for yourself. Who's going to know if you lie? Do you even need to ask?



Free Stickers

<http://www.homewrecker.com>

If you have "no moral values whatsoever" then you'll probably feel more comfortable sporting free stickers from Homewrecker, a badass San Francisco-based clothing company, than toting around a bible. All you have to do is send them a self-addressed, stamped envelope along with all the lurid details of a personal homewrecking incident. Perfect for the Jerry Springer Generation.

Free Email Compatibility Chart

Even though free Web-based email accounts are about as hard to find on the Net as porn, you should take time to find an account that truly lets you express yourself. To help you narrow the search, we've compiled this list of mail services and judged them on their personalities. If you find you're not compatible with any of our offerings, bust on over to the Free Email Address Directory (<http://www.emailaddresses.com>) and find the email account that screams you!

What It Is

1. Yahoo Mail (<http://www.mail.yahoo.com>)
2. Hotmail (<http://www.hotmail.com>)
3. ChickMail (<http://www.chickmail.com>)
4. Mac-Email (<http://www.mac-email.com>)
5. MacBox (<http://www.macbox.com>)
6. Depeche Mode Mail (<http://www.depechemodemail.com>)
7. Star Trek Mail (<http://www.startrekmail.com>)
8. ImagineMail (<http://www.imaginemail.com>)

Who's It For

1. The girl/guy next door.
2. The secretly evil girl/guy next door.
3. "Girls that don't fake it."
4. PC users—not!
5. Mac purists who insist their email run off the Mac OS X server.
6. Depressed 1980s fanatics.
7. Boys who have never dated an actual girl
8. Smart people who read magazines published by Imagine (like *MacAddict*).

Free Rent!

Every Web site needs a home, but why pay rent when you can pop a squat for free? Check out the following Web hosting services for great deals on some prime locations:

1. GeoCities (<http://www.geocities.com>)
2. Tripod (<http://www.tripod.com>)
3. Xoom (<http://xoom.com/home>)
4. AngelFire (<http://www.angelfire.com>)
5. MacRules (<http://macrules.com>)

free!



Be an ONLINE HERMIT

FOLLOW OUR EXAMPLE AND NEVER
LEAVE YOUR HOUSE AGAIN, EVER.
BY DAVID REYNOLDS

This journal was emailed to us from an anonymous source. Although we tried to trace its origins through the email headers, we were quickly stymied by our need to get lunch—it was, after all, almost noon. The journal appears to be authentic, and it chronicles one person's attempt to hole up and live out of his basement with nothing but a Mac, a fast Internet connection, and an airlock-style two-door entry system for deliveries.

We don't know much about the journal's author but we do know this: he wasn't planning on coming out anytime soon. From the spotty file we were able to discern that he developed a hostile relationship with his UPS delivery person over a razor, but of more interest were his descriptions of software tools which we've included on The Disc for your inspection. Although he seemed to have everything he needed to make his small world complete, his journal ends abruptly. We don't know why.

So why would someone lock himself away for all time? Some speculate that our journal writer was merely a sociopath to whom direct human contact was painful. Others think that he was some sort of survivalist preparing for the Y2K disaster. But our copy machine repairman hit the nail on the head when he said "Nah—he's just a freak."

Well said. Still, there are things we can learn from our "freak", such as some basic online survival skills. Read on, tender reader, and prepare to be amazed—and horrified.

The Journal

Monday, June 14, 1999 It's done. I'm in, and they're out. I'm reminded of that character in that Douglas Adams book—what's his name, something—the Sane—who thought the whole world was insane so he turned it into an insane asylum. Finally, today, though, I was able to weld shut the doors. The titanium steel should hold up to any but the most determined gate crasher. I saw the UPS guy with a puny propane torch last week, but that'll never get through. I laugh at his puny flame—Ha! But on to business.

I set up my bank account for complete online access and automatic bill payment, electronic deposits, and Quicken information download. Now, by spending just a few hours each morning with my E*TRADE account, I ought to be able to keep the money flowing in to the right places. If not, I can always lean on uncle Larry. I'm sure he'd pay a small monthly fee not to see THOSE pictures again, especially on the Web. Always have a plan B.

Now, about food—water's taken care of, thanks to the faucet, but food—hmm. Ah, but here's a place—Peapod (<http://www.peapod.com>)—that sells groceries on the Web and delivers them to your door in certain cities (Austin, Boston, Chicago, Columbus, Dallas, Houston, Long Island, San Francisco, and San Jose) for a small fee. Perfect. Now, with Maslow's basic needs met, it's time to relax. Solitude at last.



Name ☒ Overwrite

URL

Folder

File type

Link Level Link Level (Ex)

COOL TOOL #1 GETWEB 1.0

AUTHOR: Shiba TYPE: Shareware PRICE: \$15
URL: <http://www.nnet.ne.jp/~shiba/en/GetWeb.html>

My cable modem is working well but I fear that day when the Internet crashes and I am without all of my precious sites. I've begun downloading entire sites and archiving them on CD-R with GetWeb. This utility automatically downloads sites—html files, graphics, and all—and follows links to create a complete archive. GetWeb also lets me manage those sites in various lists. Best of all, GetWeb can be set to download pages at scheduled times.

http://www.ambrosiasw.com

Go

COOL TOOL #2

GO! 1.0

AUTHOR: TFSP Systems TYPE: WhateverWare

PRICE: Whatever you think it's worth

URL: http://members.aol.com/afijoeys/go

This may be the only concept from Windows that is worth saving. The teeny Go! application (which weighs in at under 250K, saving me valuable drive space) also saves keystrokes and mouse clicks by putting up a small window with an editable text box and a single button labeled Go! When I enter an URL, Go! hands it off to the most appropriate application on my Mac as set by Internet Config. I figure that I'm saving 17 minutes each day; time I'll need later to overhaul my Ditch Witch.

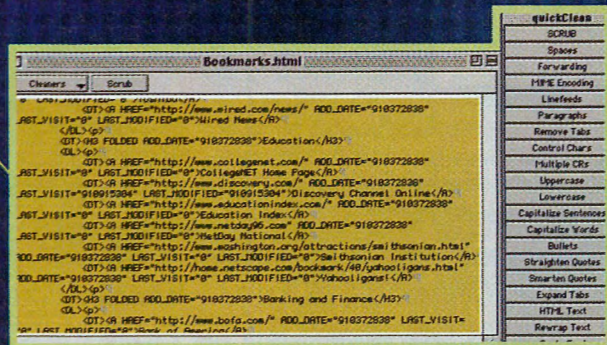
COOL TOOL #3

TEXTSOAP 2.0.1

AUTHOR: Mark Munz TYPE: Shareware PRICE: \$20

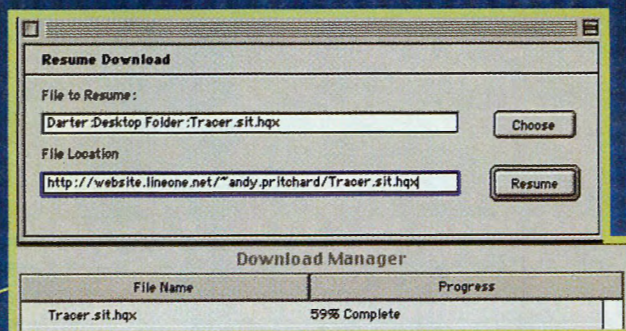
URL: http://www.unmarked.com

I swore to Brent that if he ever sent me another novella pasted into an email message, I'd personally shove it down his throat. Well, the welded door prevented me from following through on that threat when his second draft of *Grabalios* appeared in my in box, so I turned to textSOAP instead. No sense in getting the police involved. textSOAP takes those troublesome text files and strips out extraneous tabs, returns, form feeds, reply characters, and so on that make dealing with garbled text files such a pain. It works with AppleScript, supports customized cleaners, and even has BBEdit tool palettes.



Friday, July 2, 1999 The UPS guy tried to get in with his propane torch again. Said he had a package to deliver and needed to have a signature to deliver it. Then he tried to burn his way in. Didn't count on the titanium. I knew he wasn't to be trusted. He left the package outside the door with a yellow signature slip. He'll be back.

Tuesday, June 29, 1999 Need a razor. Found one at Yahoo Shopping (http://shopping.yahoo.com). I'm getting stubble burn on my arm.



COOL TOOL #4

HTTPRESUME 1.0

AUTHOR: Raj Bains TYPE: Freeware PRICE: Free

URL: http://www.jps.net/bains/

After I was stymied in my attempts to download the *Austin Powers* trailer by broken server connections, I nearly despaired, ready to open the steel doors and breathe that loathsome fresh air again. Then I found HttpResume 1.0 and all was saved. HttpResume lets me pick up my http downloads where they were broken by dropped server connections or by a crash—but that's happening less and less now, thank goodness. For now, this utility suits my download needs quite nicely, and if it fails, well, there is another: ReZoom from Black Light Shareware at http://www.blsw.com.

COOL TOOL #5

INTELLINEWS 1.1.1

AUTHOR: Paul Scandariato, Intelli Innovations TYPE: Shareware

PRICE: \$15 URL: http://www.intellisw.com

Just when I thought that ennui would take me here in my bunker, IntelliNews comes to the rescue. IntelliNews offers me a full range of customized Internet-related info including basic research tools, stock portfolio tracking, weather reports (I hope that UPS guy gets rained on), horoscopes, and assistants for setting things up correctly. Windows can be made to act like regular Mac windows or it can float on top of other windows—a real convenience for my line of work, and there's even an online quoting feature that lets me draw inspiration over and over again from someone else's words (some call it plagiarism, but I call it enlightenment).



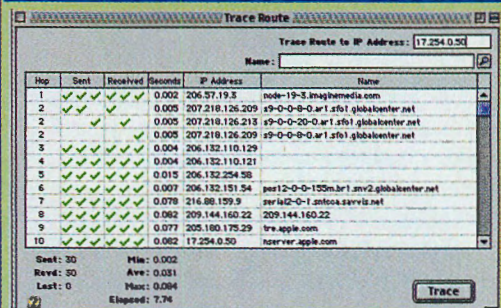
Wednesday, July 7, 1999 Messed with the Saturn guy again. Got him to bring over an SL2 sedan in green after looking at it on their Web site (<http://www.saturn.com>). When he knocked on the door, I laughed and laughed. He went away. I need to get some more Cheetos.

COOL TOOL #7 IPNETMONITOR

AUTHOR: Sustainable Softworks **TYPE:** Shareware **PRICE:** \$20
URL: <http://www.sustainable.com>

I've said it to all of my friends: no one should hunker in their bunker without IPNetMonitor. After all, until all of the supplies are laid in and caches are built, that TCP/IP connection is my only hold on power. I don't like to think about that; it makes me nervous. Perhaps I need to shave. IPNetMonitor can't pull stubble, but it can monitor nearly every aspect of a TCP/IP connection, allowing me to ping remote servers, look up DNS entries, do a traceroute on packets (to make sure that he isn't intercepting them), and otherwise monitor my TCP/IP connection. Yesterday, I

watched my RealAudio feed to look for suspicious patterns, but all I found was hunger, despair, and what seemed to be the face of George Bush taunting me.

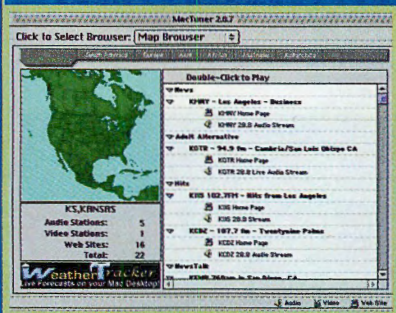


Thursday, July 8, 1999 The UPS guy came back. This time he brought out an oxy-acetaline torch and started working on the hinges. I got a little worried when he seemed to get through one of them. He said he'd be back tomorrow for his signature.

COOL TOOL #9 MACTUNER 2.0.7

AUTHOR: Trexar Technologies **TYPE:** Shareware
PRICE: \$22.95 **URL:** <http://www.mactuner.com>

It will be interesting to see which stations go out like a poorly-wired Christmas tree, but now the trouble is finding media to consume. Enter MacTuner. This widget lets you tune to RealAudio and RealVideo feeds from around the world. MacTuner also features a search engine (to look for those special stations) and a place to save all of those favorite stations. (See MacTuner review this issue p67.)



COOL TOOL #6 MACTICKER 1.1.3

AUTHOR: Galleon Software **TYPE:** Shareware **PRICE:** \$25
URL: <http://www.galleon.com>

Those entertainment utilities are all well and good, but without constant information from the stock market, I'm in real trouble. Fortunately, there's MacTicker. This utility tracks my stocks for me, giving me detailed information about each stock and running a ticker of prices across the top of my monitor. That way, I don't miss vital information that will continue to fund my project. MacTicker takes its information from six different sources (all delayed—MacTicker doesn't support real-time quotes), a real bonus for those of us who expect to experience some... short-age... of those sites, heh heh heh. MacTicker also supports alerts

to tell me when a stock has reached a certain price—vital, since this is my primary source

of support—and it lets me skip to my favorite trading sites in a jiffy.



COOL TOOL #8 NET-PRINT

AUTHOR: John Moe **TYPE:** Shareware **PRICE:** \$10
URL: <http://www.93.pair.com/johnmoe>

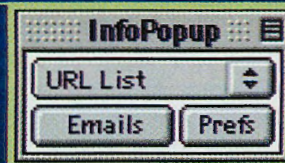


Although, strictly speaking, Net-Print isn't a network utility (it works wonders with text clippings, for example), it is especially useful for dealing with extracting and printing text from Web pages. By merely selecting some text and then selecting an item from the Net-Print menu, I am able to either print the text or save it in any one of a number of text file formats—including the much-hated Word text format (well, much hated by me, at least). Net-Print prints headers that indicate where the information came from (date and URL), and it even allows quick printing of Zip disk labels from open Finder windows—perfect for my temporary Web site archive.

COOL TOOL #10 INFOPOPUP 1.5

AUTHOR: Harold Camp Gumbert, III
TYPE: Shareware **PRICE:** \$20
URL: <http://www.campsoftware.com>

This little RealBasic widget has become a lifesaver—I don't seem to be able to remember URLs (or words, for that matter) very well. It keeps a bunch of URLs handy in a floating window, where I can access them by selecting them. It also lets me know how many emails are currently waiting to be downloaded so that I don't waste my time launching an email client if there are too few—or too many—emails to deal with downloading.



David Reynolds owns a small oxy-acetaline torch and isn't afraid to use it to get a signature.

Save 50%!
on your first month Web hosting.
Call now. Offer expires 9/30/99.

**Custom Web design. Full-time Internet access.
Web site hosting. E-commerce solutions.**
And you thought we were just another ISP.

Introducing MindSpring Biz. Everything you need to help your small business profit from the Internet, in one convenient place.

We offer direct, full-time, reliable connections to the Internet. With around-the-clock customer support, network monitoring and more.

Our professional designers will work with you to create a dynamic, attention-grabbing, customized Web site for your business.

We'll help you register your domain name, set up e-mail boxes and generate tracking data.

And we offer a full suite of e-commerce solutions ranging from catalog software to credit card authorization and payment processing.

In short, everything you need to get your business off the sidelines and on the Web is now available from the award-winning people at MindSpring Biz for plans as low as \$29.95/mo. This is what you've been waiting for.



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reviews

Why Go Back To School When You Have All This Cool Mac Stuff?

Falcon 4.0

FUN & GAMES

COMPANY: MacSoft

CONTACT: 800-229-2714 or 425-398-3085,

<http://www.wizworks.com/macsoft>

PRICE: \$69.99 (SRP)

REQUIREMENTS: PowerPC 603e, 200MHz or faster, System 7.5.3 or later, 32MB of RAM, 175MB of free hard disk space, 4X CD-ROM drive, 256K L2 cache, joystick or flight stick

RECOMMENDED: G3, 96MB of RAM, 3D hardware acceleration



FREAKIN' AWESOME

The most valuable products, the coolest gizmos.



SPIFFY

A solid offering. Overall a good investment.



YEAH, WHATEVER

A few good features, but generally a waste of time and money.



BLECH!

We hate to even blotch our pages with the thing.

Just when the Macintosh combat flight simulator market is growing stale, Falcon 4.0 flies onto the scene. Four years in the making, Falcon 4.0 sets a new standard for impressive visuals and realism. The graphics, physics, and multitude of functions achieve what the designers and developers set out to do: simulate an F-16.

The premise of Falcon 4.0 is simple. Tensions in Korea have escalated to the point of war, and you're responsible for dispensing a healthy dose of justice. Your first task, though, is to master the controls of your F-16. Falcon 4.0's learning curve matches a 7G climb, and you're going to black out before you reach the end.

Thankfully, MacSoft ships several printed training guides, including a 400-page *Flight Handbook*, a map of Korea, and a chart

of well over 100 keyboard commands. You'll greatly appreciate these references; it would be a nightmare to learn to fly the F-16 through PDF files.

The training manuals progressively expose you to all of the F-16's controls. The first section of the *Flight Handbook* is a companion to 31 simple tutorials. These missions begin with basic maneuvers and move on to all other aspects of the F-16. Lessons teach the functions of the interactive switches and dials in the cockpit and address the extensive radio system—you'll learn how to send commands to your wingman and how to find the nearest refueling tanker.

Falcon 4.0's graphics are a remarkable engineering feat. The terrain is a pleasing trade-off between photorealistic quality and designing the program to fit on one CD. Above 3,000 feet, the mountains and valleys are smooth. Close to the ground, square texture maps become visible, but they aren't distracting. The program also renders planes and other vehicles expertly. The hardware-accelerated graphics such as smoke trails, lens flares, and clouds are all gorgeous. The glass in the cockpit even reflects the surround-

THE FIRST TO LAUNCH is often the winner. When you're in range, put those tax dollars to work.



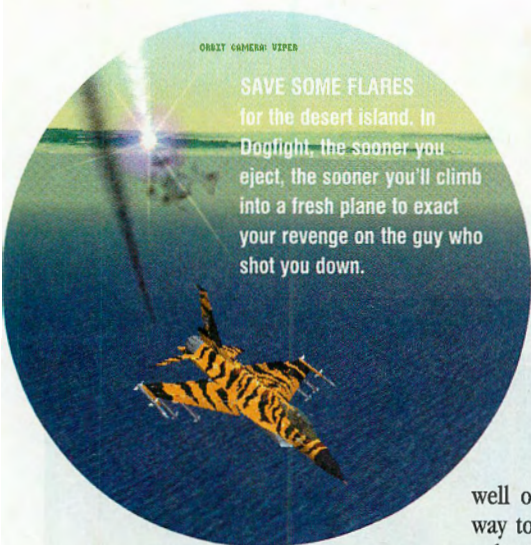
THESE ARE JUST A FEW of the controls accessible in the cockpit. You'll have to look down, left, and right to see the rest. Hurry—the target is approaching.



THE ENEMY IS LESS THREATENING after a hit with an AIM-9. Splash one bandit.

ings, making it hard to grow tired of just looking around.

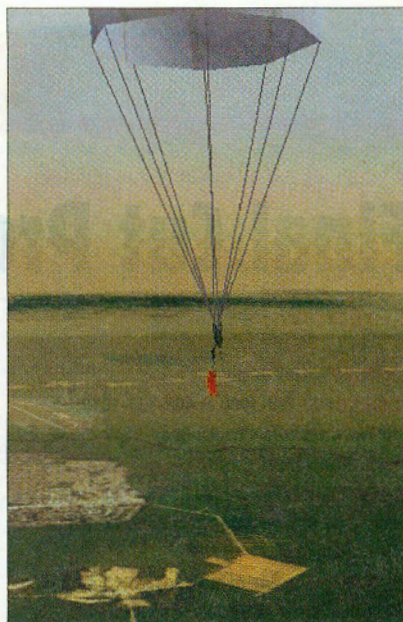
The physics in Falcon 4.0 round out the experience. The jets react very much in accordance with Newtonian physics. If you prefer arcade-style gameplay, you can trade realism for quick maneuverability and steer wherever you want without much concern for speed, weight, or gravity.



SAVE SOME FLARES for the desert island. In Dogfight, the sooner you eject, the sooner you'll climb into a fresh plane to exact your revenge on the guy who shot you down.



FLARES TAKE THE HEAT-TRACKING MISSILES away from your plane. Launch them, then maneuver to avoid the threat.



DON'T LOOK DOWN. Get your story straight on the descent. If you make a blatant error, your superiors won't be pleased.

The game types in Falcon 4.0 are more diverse than in other flight sims. The options include Instant Action, Dogfight, and Campaign. Dogfight and Instant Action require little preparation—they place you in the middle of a fight. In the most planning-intensive mode, Campaign, you can select your missions, targets, and flight paths. You can also download missions other players have designed or create your own missions within the game. With all these different ways to play, it'll take hundreds of flights to even start to exhaust Falcon 4.0's possibilities.

The multiplayer features of Falcon 4.0 offer more variety than other simulators. For example, you aren't limited to dogfights in network play. Campaign mode is more fun with another player as your wingman or even as an enemy planning strikes against your base. However, the networking functions of Falcon 4.0 have some shortcomings. Internet battles work fairly

well on a modem, but there's no simple way to find existing games. Another difficulty is that on LANs, Falcon 4.0 only supports TCP/IP connections, so AppleTalk users are out of luck.

Falcon 4.0 suffered from bugs in the earlier PC release, but fortunately the Mac version doesn't share these. Nevertheless, the porting company, Westlake Interactive, released a maintenance patch a few days after the game shipped. It's annoying to have to patch a shipping product, but in the games market, that's life. That said, the few bugs left after the update don't detract from gameplay.

As is common with cutting-edge games, the company understates Falcon 4.0's requirements. For the best performance, you need plenty of RAM, a G3, and a Rage 128 or Voodoo2 video card. In addition to high system requirements, Falcon 4.0 requires an InputSprocket-compatible joystick or flight stick. A true pilot wouldn't want to play with a mouse or keyboard.

Although Falcon 4.0 is merely a game, we like to think that it's the closest you'll

get to climbing into an F-16 and flying the unfriendly skies at Mach speeds without becoming a *real* top gun. With its impressive visuals, realistic physics, and action-packed missions, Falcon 4.0 lets you engage MiGs, liberate nations, and win medals—and you can pause to take a breath once in a while.—Zack Stern

Aim High

Get with the program: Buy more RAM. You deserve it.

Stay on target: Use the extended field of view to track one plane, but target a different one.

Use the force, Luke: Use the tracking view to approximate the direction to an enemy without radar.

Keep it tight: When turning, keep the plane between 330 and 440 knots for the tightest radius.

Trick your enemies: Drop chaff and flares early and often.



THE BLUE ANGELS would be proud. When the missiles and bombs overwhelm you, turn on your smoke trail and perform some acrobatics.

GOOD NEWS: Eye-candy overload. Supports Glide and RAVE.

Expandable missions. Realistic physics model. Superb combat flight sim.

BAD NEWS: High system requirements. Mind-blowing graphics require hardware acceleration. Steep learning curve.



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reviews

reviews

Final Cut Pro 1.0

MULTIMEDIA

COMPANY: Apple Computer

CONTACT: 800-795-1000 or 408-996-1010,

<http://www.apple.com/finalcutpro>

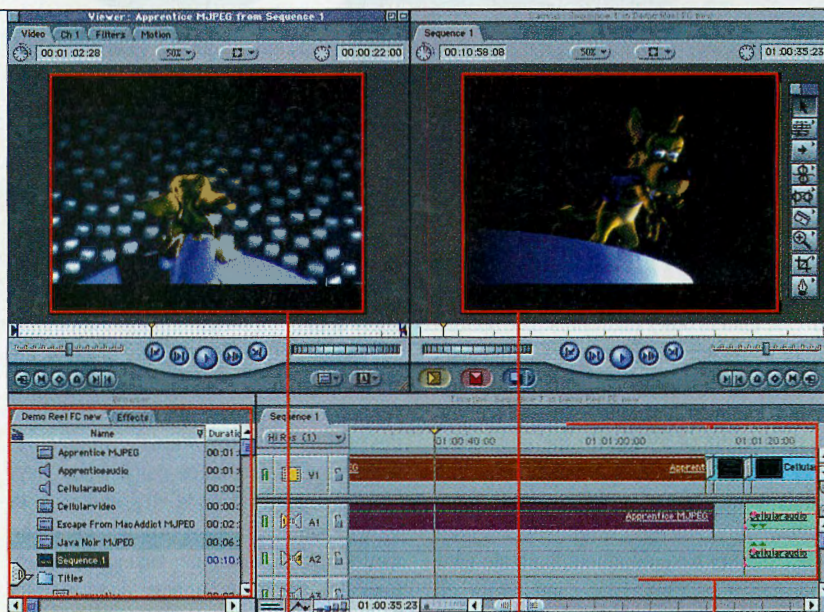
PRICE: \$995 (SRP)

REQUIREMENTS: Power Mac G3/266 (300MHz required for DV), Mac OS 8.5 or later, 128MB of RAM, 6GB hard disk

RECOMMENDED: One or more separate Ultra2 LVD SCSI media drives, a DV source connected to FireWire I/O, DV camcorder, big monitor or dual-monitor support

There has long been just one leading nonlinear editing package for the Mac—Adobe Premiere. Competitors such as Strata VideoShop and Radius EditDV have had little success in unseating Premiere, which is more powerful than its rivals and better supported in the industry, despite a few irritating misfeatures and lackluster speed. However, a serious challenger has finally arrived—from Apple, of all places—in Final Cut Pro. This app not only delivers on digital video's promise of faster, more efficient editing, it is also a pleasure to use. Even seasoned Premiere fanatics will want to take a closer look at this compact and elegantly designed new editing tool.

For starters, you would never know this is a 1.0 release; it feels like a 5.0 release. No doubt this is because the program went through an unusually long development period, first at Macromedia and then at



THE BROWSER ORGANIZES all clips and sequences, as well as effects.

USE THE VIEWER WINDOW to edit clips, including in and out points and all effects.

THE CANVAS WINDOW SHOWS your entire movie and plays it back in real time.

THE TIMELINE HAS A PARTICULARLY ELEGANT DESIGN. Note the red-and-gray bar above the time ruler—the red indicates unrendered areas.

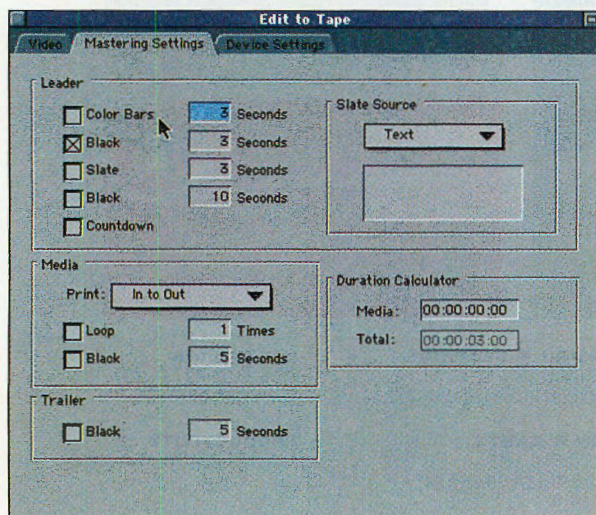
Apple. Amazingly, once we had the app properly installed on our test machine—an over-clocked 466MHz beige G3 with 288MB of RAM and an UltraWide SCSI drive—everything ran smoothly and without a hitch.

Editing with Final Cut Pro is much more like editing with a high-end turnkey system such as Avid's Media Composer. Final Cut Pro allows playback of final-quality edits directly from the timeline, without time-wasting rendering. Of course, this only applies to straight cuts; you have to render transitions or special effects as in any other program. However, Final Cut Pro renders only the portions that need it, integrating them seamlessly with the rest of the sequence. This allows you to work smoothly and efficiently, in many cases without any rendering.

PRINTING TO TAPE through FireWire is a breeze.

However, Final Cut Pro's editing approach does have a few drawbacks. Notably, the app makes it difficult to stitch together clips of different screen sizes (as you might have to do if you were assembling a reel of video mixed with wide-screen film, or a quick animatic from scanned drawings of various sizes). Final Cut Pro won't play back any clip that is not exactly the same size as the rest of the sequence until you've rendered that clip. While this makes perfect sense within Final Cut's paradigm, it can be a pain. Note that Premiere can do scaling for previews.

Final Cut Pro's interface looks a bit crowded, but it's actually easy to navigate and use. In one video window, you view and prepare clips for insertion into the sequence. In a second window, you view the entire sequence as a movie. Completing a basic three-point edit was simple. In fact, it often involved just a single movement, thanks to the pop-up menu of edit options that appears as you drag clips from one window to the other. The timeline and the





THE LOGGING WINDOW ALLOWS VERY PRECISE CONTROL over FireWire digitizing.

trimming window show careful attention to interface design, borrowing from the logical and wonderfully transparent design in Adobe's After Effects. The timeline navigation bar, for instance, looks like a device from another planet—but get the hang of it and you can jump between parts of the timeline, moving and scaling all at once, with an ease that makes the slider-and-magnifying-glass interface of Premiere look like stone knives and bearskins.

Organizing clips within Final Cut Pro is similarly intuitive. It's easy to drop clip icons into bins (folders), and to make an entire custom folder structure. More important, you can actually use one Final Cut Pro edited sequence as a clip in another—an incredible timesaver that lets you assemble large movies out of shorter, easy-to-handle segments.

Another strong point is Final Cut Pro's special effects and layer compositing features. Final Cut Pro doesn't approach the special effects power of Adobe After Effects, but it does offer some high-quality effects that are great for quick composites. A complete set of motion tools allows any clip to move, scale, or spin, and you can generate motion blur based on a layer's movement. Full bicubic scaling means the clip retains most of its detail and smoothness even if you zoom in or out on it. (Premiere's scaling algorithm tends to create nasty-looking jaggies.)

Equally important are Final Cut Pro's Transfer Controls, which allow you to add, subtract, multiply, or otherwise combine the values of the pixels in one layer with those in another. These operations are the cornerstone of many complex effects. There is an abundant selection of filter tools, too. You can animate all of the attributes for any

video or audio effect using function curves, a gigantic leap beyond Premiere's lame keyframe interface.

About the only caveats with Final Cut Pro involve hardware compatibility. You'll definitely want a G3 and Mac OS 8.5 or later to run Final Cut Pro. This may cause grief to editors who have older machines with six PCI slots (which may not be compatible with 8.5). FireWire I/O is very desirable, too, as the app is especially good at interfacing with FireWire devices (see "Final Fire"). However, Final Cut Pro fails to support a number of popular analog video output cards. We found our unsupported Aurora Fuse MJPEG card had sound-sync problems with unrendered output direct from Final Cut Pro. Check Apple's FireWire site for an up-to-date list of compatible video cards.

The final analysis? Final Cut Pro is a robust program with killer features that editors who want a fast, efficient workflow will find irresistible. If you've got a heavy investment in older hardware (such as a six-slot Mac), you may need to think hard before choosing Final Cut Pro over time-tested Premiere. But if you're moving into the world of DV, FireWire drives, and just-in-time content creation, Final Cut Pro is the way to go.—Raf Anzovin

Final Fire

Final Cut Pro really shines when it comes to using FireWire and the DV codec. Final Cut can exercise direct device control over a FireWire device—a DV camcorder or VCR—allowing it to do the menial tasks of capture and output much more quickly and easily.

When digitizing footage from a DV device, Final Cut's logging window replaces the usual VCR-like record button. The logging window grabs picture information directly from the DV device without requiring you to press play or stop. You can literally scrub through the contents of a DV tape from this window just as

easily as if you had already digitized it and put it on the hard drive. You can choose in and out points in this window for each clip with complete frame accuracy. Once Final Cut Pro has logged all the clips, it captures them all at once in a single automated step.

Output to a DV device is similarly simple and accurate. Instead of popping in a tape and pressing the record button while the video signal goes to the VCR, to print to a DV tape you simply choose the frame on the tape where you want the movie to start. The movie prints directly to that area of the DV videotape.

GOOD NEWS: Intuitive and elegantly designed. Fast editing workflow. Dynamic rendering. Advanced effects. **BAD NEWS:** Rendering footage of different sizes is harder than it needs to be. Sync problems with unsupported video output cards. Requires a beefy Mac.





Canoma

DESIGN & GRAPHICS

COMPANY: MetaCreations

CONTACT: 800-846-0111,

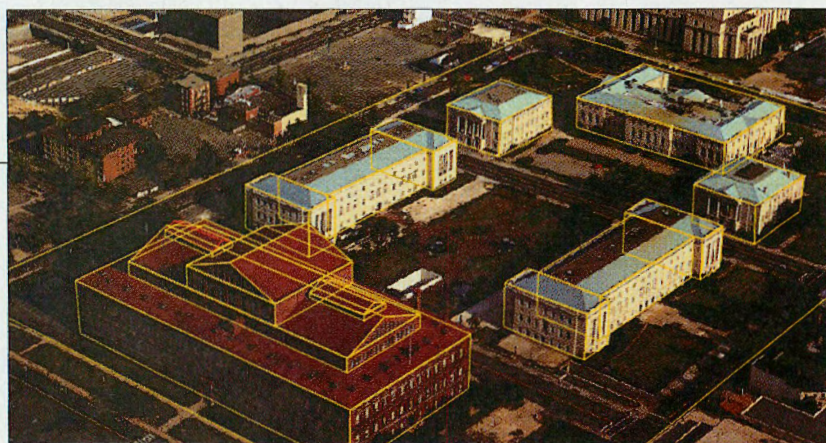
<http://www.metacreations.com>

PRICE: \$499 (SRP)

REQUIREMENTS: PowerPC, Mac OS 8.0 or later,
32MB of free RAM, 50MB of free hard disk space,
CD-ROM drive, 24-bit video

Modeling 3D objects is one of the hardest tasks for an artist. Correctly accounting for perspective, size, and shape (especially for real objects that viewers would easily recognize) can be a painstaking process for those just getting started with 3D. Many programs available now make it easier to create 3D models than before, but no program has ever made it simple to turn a complex 2D photograph or image into a polygon-rich world until now. MetaCreations's Canoma does exactly that. It enables you to quickly, that is to say within five minutes or less, turn a fairly detailed 2D image of a building or object into a polygonal 3D object that you can rotate, zoom, and export to other 3D apps.

The first time you transform a 2D image into a 3D model is nothing short of breathtaking. The process is simple and intuitive, and MetaCreations's signature interface, which people either love or hate, actually complements the authoring process. The fundamentals of Canoma are simple: Click one of Canoma's shape buttons to create a wire-frame polygon to map onto a 2D image (the



CANOMA ALLOWS YOU TO QUICKLY AND EASILY CREATE 3D models from 2D pictures by placing wire frame polygons on an image and rendering the wire frames with the 2D picture as a texture map.

wire frame must match the shape of the image), move the wire frame into position over the 2D image while being careful to align the corners and sides of the wire frame to the corners and sides of the image, and click render. Canoma will then create a polygon in 3D space and map the 2D image to the sides of the 3D model. Of course, the process we just described produces a very primitive 3D model, but the work required to create a complex 3D image is essentially more of the same: choosing a wire frame that resembles the shape of the 2D image you want to model and lining it up.

The process of aligning wire frames uses a metaphor that works beautifully. If you want to transform a 2D picture of a square building into a 3D model, you would begin by putting a matching 3D wire frame into the image. Canoma's version of a square probably won't match the square building exactly, therefore

you have to line it up by putting a pin in one of the corners of the wire frame and pinning that wire frame corner to a corner of the building. Once pinned in place, the corners stay fixed unless you move them. You can pin all the visible corners in this way, which makes alignment quite simple. A second method of alignment is to use a handle, which MetaCreations calls a bead, to pull an entire side to where it should be.

Determining height in a 3D world can be difficult, but Canoma allows you to stack and align new wire frames with existing wire frames. If you're modeling a ziggurat, for example, this would ensure that each level actually sits atop the level below it as opposed to hovering slightly above, a mistake many newcomers to 3D make. To lock the wire frames together, you can use a Glue tool to stick a wire frame's corner to a side or corner of another wire frame, ensuring a tight fit.

USING THE IMAGE WINDOW, you can add or subtract images that will be used to make a 3D model and navigate between them.

THE DISTINCT METACREATIONS 3D navigation tools make rotating, panning, and zooming into a 3D image simple.

THE CREATION TAB PROVIDES access to the primitive 3D wire frame objects that you can use to construct a 3D model in.



ALL OF CANOMA'S MOST USED TOOLS are only a click away on the toolbar, including Pinning, Glue, and Zoom.

THIS WINDOW FUNCTIONS both as a preview pane as wire frames are pinned into place and as a render pane where you can examine and move a 3D rendered object.

PEOPLE EITHER LOVE OR HATE MetaCreations's unique interface, but in Canoma, it actually enhances the usability of the product.



CANOMA FEATURES BASIC ANIMATION TOOLS, you can create flybys of a model using simple keyframe recording.

Once you map a picture with wire frames, Canoma renders it as a 3D model that you can circle and look at from any angle just like any other 3D model. Of course, the sides of a 3D model that Canoma can't see (the ones behind the visible sides in a photograph) won't have any bitmapped images on them. To correct this, Canoma offers several options. One is to mirror the bitmap such that opposite sides of the model look the same. This approach doesn't always yield useful results, however, as the image will probably become distorted. As a second option, you can use a photograph taken from the opposite angle of an object and map it to the back of the 3D model, covering all sides of the object. This approach works very well, but only if photographs of multiple angles of an object exist. The third possibility is to make 2D textures either from a photograph or by hand, then assign them to the different sides of the wire frame polygon. Aside from offering a way to cover or enhance the appearance of a 3D model, this approach also allows you to really experiment with the model's look. For example, a picture of a brownstone, modeled in 3D, could easily have a straw or clay texture mapped to the sides to create a very different look in seconds. The possibilities for experimentation here are virtually unlimited.

On the technical side, you can export 3D models created in Canoma in the usual formats, including DXF, WRL, VRML2, and MetaCreations's own MetaStream. Canoma also features a relatively simple keyframe animation function that you can use to create walkthroughs of 3D models or flybys.

Although Canoma is an amazing product, it does show its version 1.0 youth. The biggest problem is that Canoma doesn't handle

curves or spheres easily. The Creation palette ships with a lot of useful 3D wire frames, including tables, arches, roofs, and stairs, but try to model the Epcot Center or a dome, and the program starts to feel a little limited. Texture seams, where white shows at the edges of two sides of a polygon, can also prove difficult to correct, as the wire frame may appear to be correct in the pinning view, but then not quite line up when rendered. Textures applied from 2D images also have a tendency to stretch or warp near edges and corners, even though the pinned wire frame looks correct. Some of these quirks are simply inherent to working in 3D, while some are due to Canoma's relative youth.

Canoma's ability to quickly make 3D worlds out of a 2D image and map any bitmap to any facet in that 3D world is delightful to use and unsurpassed in ease. There is no question that Canoma is an amazing product. Aside from a few technical issues, only the price holds this product back. At \$499, Canoma is expensive. To game designers and 3D artists it will be a boon, but as a utility, not a final modeling solution. To the other markets Canoma is aimed at, including professional designers, Web site developers, and interior designers, Canoma is, again, a very expensive utility. Potentially the biggest market for Canoma is hobbyists getting into 3D. If Canoma sold for only \$150, it would probably ship in 10 times as many units.—Rick Sanchez

GOOD NEWS: Quickly generates 3D models from 2D images. Interface complements functionality.

BAD NEWS: High price. Doesn't handle round or curved objects well.



\$49.99

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RDC-5000

HARDWARE

COMPANY: Ricoh**CONTACT:** 800-225-1899 or 775-352-1600,<http://www.ricohcpg.com>**PRICE:** \$699 (SRP)**REQUIREMENTS:** Mac with serial port or factory-original USB, Mac OS 8.5 or later, CD-ROM drive to install software**SPECIFICATIONS:** 2.3-megapixel CCD with 2.15 active megapixels; 2.3X optical zoom lens; has 8MB internal memory and uses SmartMedia cards; 1.8-inch TFT LCD; USB support; video in/out; optional remote control (\$25); accepts alkaline, NiCd, NiMH, and Lilon AA-size batteries (AC adapter included)

Photo by Aaron Lauer

THE RDC-5000 SPORTS A SLEEK DESIGN that disguises its phat 2.3-megapixel resolution.

The latest generation of consumer point-and-shoot digital cameras boasts a 2-megapixel resolution or higher, which means ultrahigh-res images, a far cry from the 640 by 480 pixel or 800 by 600 pixel images of the first digital cameras. Among this fresh crop of cameras is Ricoh's RDC-5000, which claims a 2.3-megapixel resolution. Packed with features, this slim silver camera is one of the first to also provide USB connectivity.

The RDC-5000 sits in a sleek, lightweight case that's comfortable to hold and handle. The optical viewfinder, which traditional film photographers will find reassuring, is well placed near the midpoint of the camera's width. The thumb dial is also a familiar control, with easy-to-understand icons representing main camera functions. For example, selecting the Trash Can icon sets the RDC-5000 to Delete mode. In

addition, the camera's LCD, which serves as a digital viewfinder, features simple controls. The RDC-5000's LCD also features a brightness control, which is

very useful for low-light conditions. Unfortunately, noticeable graininess mars this LCD's quality, regardless of light levels indoors or outdoors.

But what about taking pictures? The RDC-5000's autofocus is acceptable for everyday photography, and the manual overrides are great for those who want tweakability and control. One of the autofocus's more remarkable abilities is that it can pass seamlessly from normal focal lengths to Macro mode, allowing you to take snaps from as little as 1.6 inches from the subject. With other digital cameras, such as the Epson PhotoPC 750Z, you have to select Macro mode manually with a function button. Also remarkable is that the RDC-5000's Macro mode not only performs to specs, but allows one of the tightest focal distances in its class. You need a darn steady hand at that close range, though, because even the slightest hand movement makes the Macro shot a little blurry.

Pictures taken with the RDC-5000 look best at 1792 by 1200 in fine quality, the camera's maximum resolution. At this size, image quality is crisp, with accurate colors in the right lighting. In low-light conditions,

the image sometimes takes on a red cast. For the artistically inclined, the RDC-5000 also takes black-and-white or sepia-tone images. This is a laudable feature, because you can capture very high-res, Ansel Adams-style images—well, you can try anyway. In any color mode, the RDC-5000's output needs some tweaking in Photoshop, but this is true of any digital camera.

Overall, Ricoh's RDC-5000 is a highly commendable camera with only one main drawback: its USB implementation. The USB driver was flaky and misbehaved, asking us to disconnect the cable or failing to initialize the SmartMedia disk. We tried the USB connection on blue-and-white G3s, but it failed to work at all. What made matters worse was that the serial cable provided was PC only. Consequently, we had to attach a Mac adapter to it to make it functional on a beige G3. Another rough spot: Windows users get four more bundled apps than Mac users.

If the USB connection were solid and a Mac serial adapter were included, then the RDC-5000 would deserve a *Freakin' Awesome*. For now, however, the RDC-5000 warrants a respectable *Spiffy*. —Jennifer Ho

AT 1.5 INCHES the camera still captured clear images.



BLACK-AND-WHITE MODE allows you to capture the play of light and shadow as in this eerie, foggy scene.

**GOOD NEWS:** Ultrahigh-res images.

Easy-to-handle and lightweight form factor. Adjustable LCD brightness.

Built-in 8MB SDRAM. Intuitive controls.

Continuous and time-lapse shot capability. Serious Macro mode. Automatic power off saves battery life. Text mode for capturing documents.

BAD NEWS: Requires a special Mac adapter.

Grainy LCD image regardless of light conditions.

Temperamental USB driver. Windows software bundle has four more apps than Mac bundle. Only works with standard Apple USB.



reviews

Que USB CD-RW drive

HARDWARE

COMPANY: QPS

CONTACT: 800-559-4777, <http://www.qps-inc.com>

PRICE: \$299 (SRP)

REQUIREMENTS: 266MHz G3 or faster, Mac OS 8.5.1 or later, 32MB of RAM, CD-ROM drive, 10MB of free hard disk space, 70MB free hard disk space for disk cache



photo by Aaron Lauer

THE DRIVE WHOSE NAME NO ONE KNOWS for sure how to pronounce takes a licking and keeps on ticking...um, we mean, burning.

If your get-rich-quick scheme involves pirating CDs with the Que USB CD-RW drive, you might want to rethink your business plan. However, if you're desperate to back up your hard drive on CDs and don't mind a system crash, this drive might be the way to spend that \$299 lying around.

The drive looks impressive. But good looks aren't everything. Due to the inherent limitations of USB, the Que burner is butt slow compared to its SCSI counterparts. A 19-track CD with 72 minutes of audio took about 45 minutes on a 266MHz iMac to burn onto a CD-R using Adaptec's Toast at 2X speeds. Our 266MHz G3 burned the same tracks in under 20 minutes using a SCSI burner running at 4X speeds.

In addition to its speed problems, the drive is about as reliable as a one-legged dancing bear. You must set the memory settings precisely as directed in the troubleshooting guide, or you can expect repeated system freezes. However, even if you follow directions, still brace yourself for freezes, hard crashes, occasional data corruption, and wasted CDs. We tried to record 19 audio tracks on ten discs and had data errors or crashes on seven of them.

The Que drive is slow and unreliable, but it *is* sturdy! We dropped the drive, but amazingly, sometimes it worked, sometimes not—just like before The Accident. If you're looking for an inexpensive flawless USB CD-RW drive, this drive isn't it. —*Nikki Echler*

GOOD NEWS: The price is right, and when it works, it's really convenient.

BAD NEWS: It doesn't always work, and when it does, it's sllloooooooowww.



Hubba Hubba

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Want to really plug-in to power packed pleasure? Try connecting up to 127 USB devices to your iMac or G3. Yes, it's possible with the new PowerUSB 4-Port Hub from TechWorks. PowerUSB delivers connectivity to all your USB toys such as printers, joysticks, cameras, speakers, scanners and much more. Why wait? Just plug-in and enjoy. Plus, with over a decade of experience, TechWorks guarantees quality products and service!

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Portfolio 4.1

PRODUCTIVITY

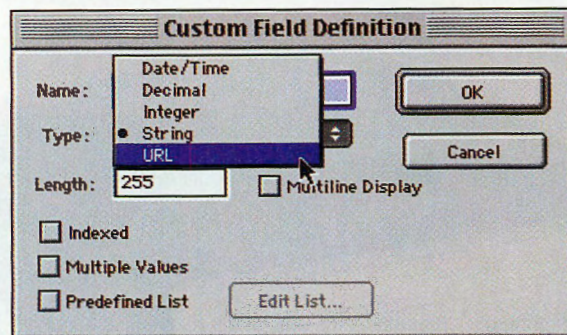
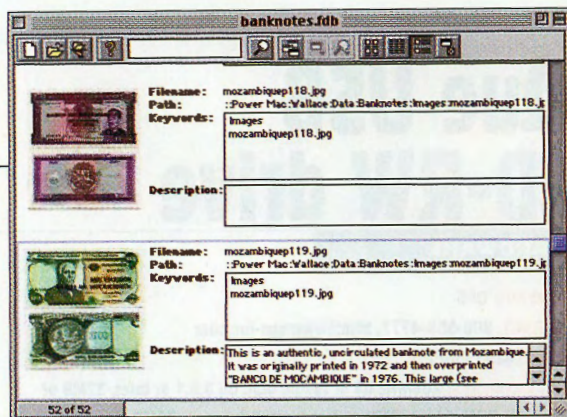
COMPANY: Extensis

CONTACT: 800-796-9798 or 503-274-2020,
<http://www.extensis.com>

PRICE: \$199.95 (SRP); upgrade from 3.0, \$99.95

REQUIREMENTS: PowerPC, System 7.5.3 or later
(System 7.5.5 or later recommended), 6MB of free
RAM, 20MB of free hard disk space

DISPLAY DETAILED DATA for individual digital assets in Portfolio's new Record View, which combines features of the thumbnail and list views.



Portfolio is a cross-platform digital asset management application for cataloging graphics, 3D objects, sounds, and QuickTime movies in galleries you can browse visually or search by keyword. Version 4.1 is the latest in a string of major updates to the program since Extensis acquired Portfolio (formerly Fetch) from Adobe in 1996. Significant new features include custom URL fields, importing, find and replace, individual record views, slide shows, HTML exporting, scripting, and a client-server option.

The basic operation of Portfolio remains unchanged: Drag and drop one or more volumes or folders into a window, and the program extracts or creates a thumbnail of each file, adding the file name, location, creator, creation date, and other data to the catalog. The time required depends on your Mac's CPU speed and the number, size, and type of files. You may then add an unlimited number of user-definable keywords; a 32,000-character description; and custom fields for date, time, decimal, integer, string, and URL data. The new importing and find-and-replace features make it easy to apply information globally either from an existing database or on an ad hoc basis, respectively.

You can view items as traditional gallery thumbnails, as a list, or in the new Record View format, which displays more information alongside a thumb-

nail. Although you can fully customize each view, you can't directly edit the visible fields, and there are no proportional scroll bars or tools for navigating large catalogs. The powerful Find feature allows you to select specific items that match complex criteria and even to save frequently used searches, but that's not a substitute. Also annoying is the inability to maintain a custom sort order after performing a find. Finally, the relationship between original items, catalog records, and gallery views remains confusing due to the menu names and organization.

Portfolio 4.1 comes with tools for professionally presenting your images. You can create a splash screen for your catalogs, design custom borders for thumbnails, and use the new bare-bones slide-show capability. Addressing a longstanding shortcoming, Extensis now provides a freely distributable read-only browser, which you can burn onto CDs with your catalogs.

More ambitious users will appreciate the new HTML Export command, which can publish catalogs on the Web complete with JPEG

NEW WEB FEATURES allow you to specify a URL for each record, as well as providing the ability to export a catalog in HTML format.

thumbnails, but you'll have to do some hand coding to get the look you want. If that doesn't faze you, you'll probably also appreciate the new support for scripting with AppleScript, which allows you to automate tasks within Portfolio and between other applications (several useful sample scripts are provided). In contrast, collaborating on catalogs with other Portfolio users on a network is relatively easy through File Sharing. An optional \$2,500 Portfolio Server is available for offices that crave better performance and the ability to host simultaneous users without requiring existing Portfolio users to install new client software.

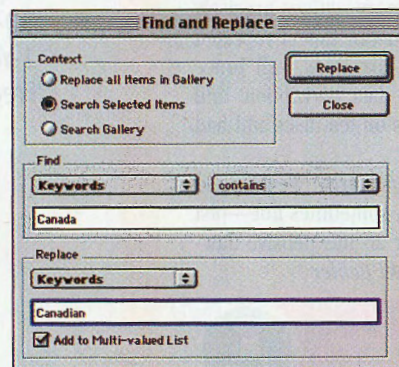
With a host of powerful new features, Portfolio 4.1 remains a valuable tool for content creators trying to keep track of digital assets. However, a confusing nomenclature and poor interface design obscure some of that power. Fortunately, the detailed user guide is well-written and free technical support is available via a toll-free call.—Owen W. Linzmayer



Scripts

Background Cataloger
Change Path
Find Duplicates
Move DCS Plates
Set Desktop Picture

PORTFOLIO NOW SUPPORTS SCRIPTING and even includes a handful of samples to get you started.



WHOLESALE KEYWORD CHANGES are a snap with the new Find and Replace feature.

GOOD NEWS: Cross-platform.

Powerful new features. Relatively

inexpensive. Multiuser capability.

Support for AppleScript. **BAD NEWS:**

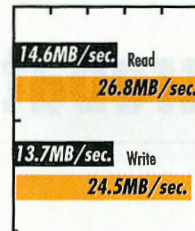
Some operations are complex and counterintuitive.



Think Performance.

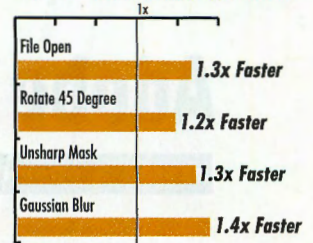
Improve the performance of even the fastest G3 with Hard Disk ToolKit 3.0. Turn multiple drives into blazing fast disk arrays with RAID support. Create scratch partitions that supercharge applications such as Adobe® Photoshop® and Premiere®.

Disk Array Performance†



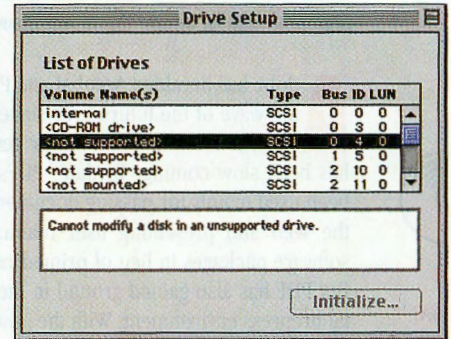
Photoshop Performance*

Times Faster Than Standard Apple Partition



Think Versatility.

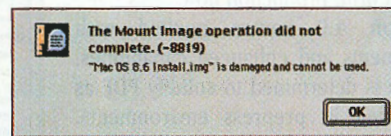
The simple drive utility that came with your Mac is designed to support only the hard drive that came installed with your Mac. Hard Disk ToolKit is hand-tuned to maximize the performance of over 1,000 storage devices, including the one in your Mac. We also offer data encryption, password protection, device cloning, and the ability to optimize specific drive parameters.



Apple Drive Setup

Think Reliability.

Using the Apple driver on third party drives may lead to data loss. Hard Disk ToolKit offers superior reliability. It even tests all your drives at start-up and warns you of imminent disk failure.



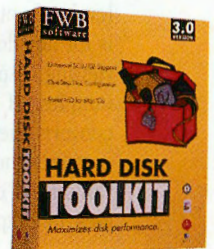
A problem you may experience when using the Apple driver on third-party drives.



Hard Disk ToolKit Diagnostics

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www.microcenter.com

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* Photoshop Test Parameters: 54 MB CMYK Photoshop File, Power Macintosh 300 MHz Blue and White G3, Mac OS 8.5.1, Apple 6 GB hard drive filled to 75% capacity, 64MB RAM, 32MB allocated to Photoshop 5.0.

† Disk Array Test Parameters: Power Macintosh 300 MHz Blue and White G3 with single SCSI drive vs. two-drive disk array. Benchmarked with MacBench® 5.0's Sequential Read/Write Disk Test of 1024K file size.



Adobe Acrobat 4.0

DESIGN & GRAPHICS

COMPANY: Adobe Systems

CONTACT: 800-642-3623, <http://www.adobe.com>

PRICE: \$249 (SRP), \$99 upgrade

REQUIREMENTS: PowerPC, System 7.5.3 or later, 6MB of application RAM (12MB recommended), 16MB of application RAM for Distiller (32MB recommended)

Adobe has heralded Acrobat and PDF as the wave of the future ever since their original release, but a major revision has been slow coming. To date, PDFs have been used mainly for passing documents on the Web and presenting user manuals in software packages in lieu of printed copies. But PDF has also gained ground in the digital prepress environment. With the advent of Adobe Acrobat 4.0 and its increased development and capacity in prepress handling functions, PDF has become a workhorse in the digital print production flow.

Version 4.0 comes packed with improvements and enhanced capabilities, as Adobe is determined to solidify PDF as the solution in prepress environments. Acrobat 4.0 simplifies PDF creation, expands annotation tools, and adds color management and new font-handling capabilities. Also, you now have the ability to make changes directly to both images and text in your PDF documents.

To simplify PDF creation, Adobe Acrobat 4.0 allows drag-and-drop or print-from-file functions and comes with three levels of optimization. Screen Optimization is for any document intended for onscreen viewing, especially on the Web. It down-samples all of your images to 72 dpi and converts them to RGB, resulting in more-compact and faster-loading files. The Print Optimized choice is for producing PDF files to output to laser or inkjet printers

and digital copiers. The Press Optimization feature creates files for your service bureau or prepress facility—files that end up as professionally printed documents.

Increased print production capacity is the one major feature that promises to

Test for Adobe Acrobat 4.0

APPROVED

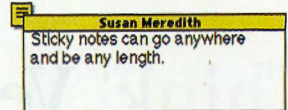
Features:

Simple PDF creation in three standard options

- Screen Optimized
- Print Optimized
- Press Optimized

Expanded annotation tools

- highlight
- pencil
- attach sticky notes



Print Production Features

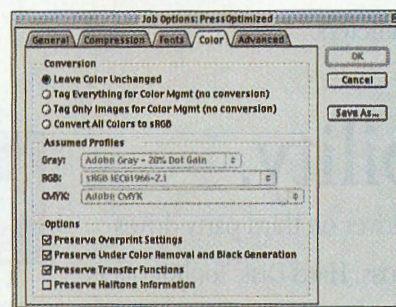
- Adobe PostScript 3
- enhanced color management features
- advanced font embedding and subsetting
- image editing in PDF files
- plug-ins available for text editing in the PDF file

HIGHLIGHT, MAKE NOTES, and put your stamp of approval on PDF proofs.

images in the PDF files themselves. Clicking an image in your PDF document launches Photoshop or Illustrator; you can capture changes from these apps and set them in your PDF document. The TouchUp Text tool allows minor text changes and lets you fix annoying typos that everyone missed. Third-party plug-ins provide a greater capacity for substantial text editing.

Using PDF as both a proofing tool and a vehicle for customer and co-worker communication has gotten much easier with Acrobat 4.0. Adobe has added annotation tools that stay on their own layer, giving you and your clients the ability to make notes and comments without changing the content of the PDF document. You can place sticky notes of any length anywhere in your PDF document. In addition, you can move, sort, import, export, and identify sticky notes. A Highlighter tool enables underlining and strike-through text. The Pencil lets you mark up text or circle errors, and the Rubber Stamp lets you place your seal of approval. With all these fun tools, everyone—you, your clients, and your coworkers—can review a PDF proof and have a go at adding comments to the work.

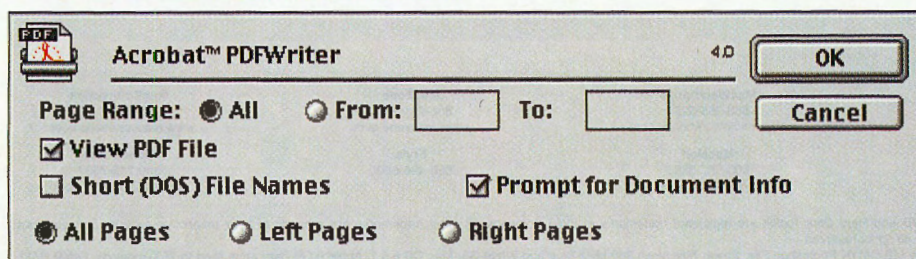
The new and improved features, and Adobe's impressive concentration on the creation of PDF files that work efficiently in commercial printing and prepress environments make Acrobat 4.0 live up to its original promise; PDF certainly seems to be the wave of the future.—Susan Meredith



CUSTOMIZE YOUR OPTIONS in the Job Options menus for each of the three Optimize functions.

establish Acrobat 4.0 and PDF as one of the best prepress workflow solutions. Acrobat 4.0 allows you to use color management systems and embed color profiles in your PDF document. Font management features are also improved: The capacity to embed complete fonts or to make subsets and embed only the characters in the file eliminates the headache of sending fonts to your service bureau, as well as some of the problems associated with font substitution and text reflow. And finally, Acrobat 4.0 allows for those last-minute changes to text and

PDFWRITER PRINT DIALOG box writes your PDF to file.



GOOD NEWS: Drag-and-drop PDF creation. Three PDF creation options based on final use. Enhanced annotation tools. **BAD NEWS:** It should have happened sooner.



ScanMaker X6

USB from Microtek

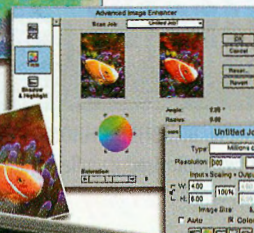


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QuickTime 4.0

MULTIMEDIA

COMPANY: Apple

CONTACT: 800-795-1000 or 408-996-1010, <http://www.apple.com/quicktime>

PRICE: \$29.99 Pro version (SRP), free standard version

REQUIREMENTS: 68020 or faster, 8MB of RAM, System 7.1 or later

RECOMMENDED: G3, Mac OS 8.5.1 or later

After one of the longest windups in multimedia history, Apple has finally pitched a new iteration of QuickTime. Version 4.0 looks fresh and has groundbreaking new features, and the standard version is still free (though we recommend getting QuickTime Pro for \$29.99). That's all to the good. But the QuickTime team has also committed some faux pas that will have you asking just what they were thinking.



QUICKTIME 4.0'S NEW, BRUSHED CHROME PLAYER hides not one, but two motorized trundles—one for audio controls, one for Favorites.

The big news in QuickTime 4.0 is real-time streaming, the long-promised ability to stream movies and audio in real time over the Web. The QuickTime Streaming Server software is free, but setting up a streaming server requires a machine running Mac OS X Server (\$495), and probably an additional Mac to digitize and reflect content to the server hardware. Still, this is better than the streaming arrangements RealNetworks, maker of the popular RealPlayer, dictates—it charges a hefty license for each server setup. While you may not need to serve your own content, you can certainly view it at any streaming QuickTime site. We think streaming QuickTime movies look better than the same movies played through RealPlayer—at

least on fast connections. (At 56 Kbps, all streaming content looks so awful that you can hardly tell the difference.)

You can now play your MP3 collection in QuickTime 4.0, too. That's just one of several new file formats it supports, including FLI (the Autodesk animation format) and Karaoke (we haven't tried this yet, but it sounds cool). The range of formats truly makes QuickTime 4.0 a universal standard; the upgrade is worth it just for this.

So what enticed Apple to wreck the interface for MoviePlayer, now called QuickTime Player? This mini application now sports a bloated and tacky brushed-chrome appearance, like a cheap gadget from The Sharper Image. The window lacks most of the standard Mac window controls you've grown to know and depend on. Additional gratuitous irritations include an eye-distracting sound-level meter you can't hide or turn off, a volume thumb wheel you simply can't operate with a mouse, and a motorized drawer that trundles out at the speed of molasses when you need an essential feature such as the rewind button. We strongly recommend that you learn the key commands for most QuickTime Player functions, because they're easier to use than the new interface controls.

The worst offender is the Favorites drawer. This classic example of bad design—possibly the worst ever to come out of Apple's own shop—lets you plop your favorite movies and MP3s into little pigeonholes. Note, however, that the icons in the pigeonholes have no names, and most movie icons show up in plain black. Moreover, if you move the QuickTime Player down toward the bottom of the screen, or open a movie that takes up most of your screen, you won't be able to open the Favorites drawer at all. It's any-



QUICKTIME PLAYER DOES JUST ABOUT EVERYTHING wrong in the interface department. Even Mick Mallard is depressed about it.

one's guess why Apple, which wrote the book *Human Interface Guidelines* (we've still got our copy), would diverge so much from its own principles.

The new installer is trouble, too. Every time you do an install, it requires you to connect to an Apple Web site and download a stub, which then asks you to do further downloads. That means no installations on machines without a modem; no downloading for later installation; no installations through a firewall; and no installations without contacting Apple, which can gather information on your machine while you do the install. (At press time, Apple had announced that it would eventually make QuickTime CD-ROMs available for offline installations. This would address most installer problems.)

QuickTime has always been one of the very best things coming from Apple. Streaming, MP3, and expanded support for more file formats have made it even better. But Apple should keep in mind that nothing is so good that it can't go bad.—Steve Anzovin

GOOD NEWS: Low-cost streaming. MP3 playback. More pro-level features and compressors.

BAD NEWS: Worst QuickTime Player ever. Installer can cause problems. Mac OS X Server required to stream content.



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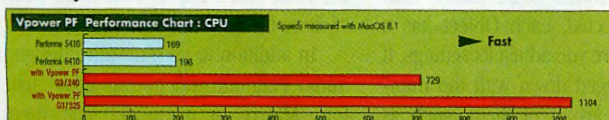


\$149

Apple 54, 55, 64, 65 20th Anniversary Super Mac C500

"Freakin' Awesome"—MacAddict

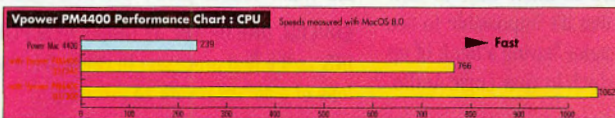
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—MacWorld

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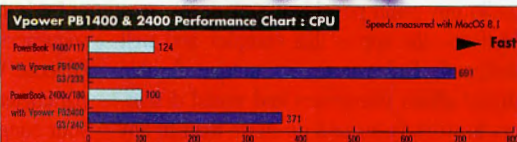
As seen in MacWorld
March 1999



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\$339

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PCI Power Mac

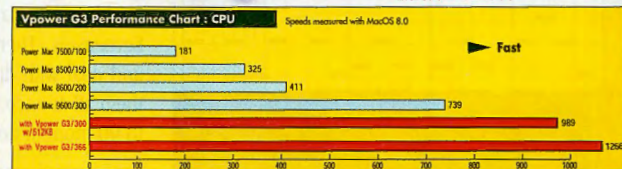
Bring your Power Macintosh into the G3 generation with a Vpower G3 upgrade card, and enjoy the best price-to-performance ratio available on the market!



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—MacAddict



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Vpower G3/366	Power Mac 7300,7350,7500,7600,8500,8550,8600,9500,9600,9650 UMAX \$900,\$910	G3/366MHz	1MB/183MHz	\$ 659
Vpower PB 1400 G3/233	Power Book 1400	G3/233MHz	512KB/117MHz	\$ 339
Vpower PB 2400 G3/320	Power Book 2400	G3/320MHz	1MB/160MHz	\$ 899
Vpower PM 4400 G3/240	Power Mac 4400,7220 Motorola Star Max 3000, 4000 series	G3/240MHz	512/120MHz	\$ 289
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Logic Audio Platinum 4.0

AUDIO

COMPANY: Emagic

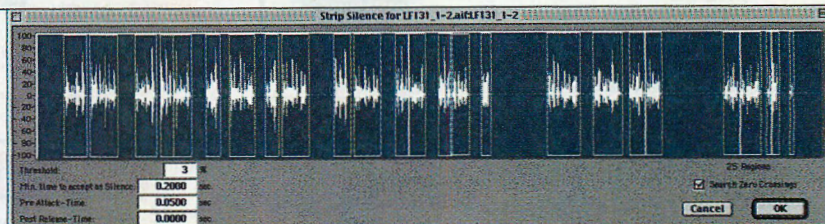
CONTACT: 530-477-1051, <http://www.emagic.de>

PRICE: \$799 (SRP)

REQUIREMENTS: PowerPC, 120MHz or faster (63 recommended), System 7.5.3 or later, 32MB of RAM (128MB recommended)

Emagic's long-awaited Logic Audio Platinum 4.0 is the new Rolls Royce of Mac audio software. It features a state-of-the-art sequencer, an exceptional integrated stereo sample editor, professional-level score notation, and a fully programmable audio and MIDI track mixer. To sum it up, Logic Audio Platinum 4.0 has more features than any audio pro could possibly use or master in a lifetime—the app is that complex and well designed. Furthermore, its unique flexible design allows composers and sound designers to work faster and do more than in any other program we've ever encountered. Logic Audio 4.0 impressed us, and we highly recommend this audio powerhouse.

Logic Audio 4.0 achieves a functional depth well beyond that of other audio systems with its Environment concept. Environment contains a series of screens organized in layers; a virtual representation of all the MIDI and audio hardware in your studio; and Logic Audio's own mixers, processors, and devices such as arpeggiators and delays. Also, the flow

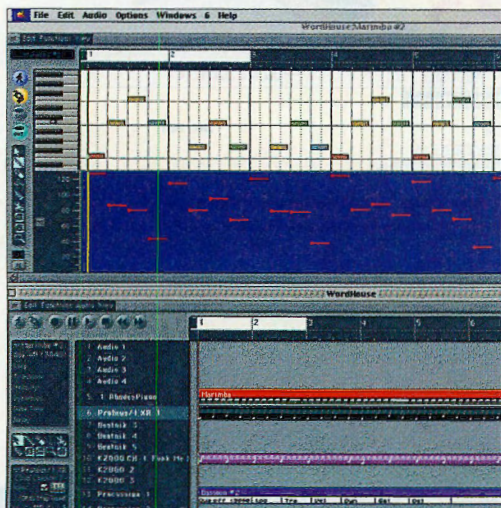


THE STRIP SILENCE FUNCTION IS THE BEST WAY around to divide narration or rhythmic audio tracks into separate Regions.

That's the idea behind Screensets. Press a number on your computer to bring up the exact view you need. You may open any number of Screensets at once, and you can link their displays, so what you do in one window is reflected in another. Once you get used to the idea, you'll never want to go back (see "Setting Up Screensets").

In addition to an innovative design, Logic Audio Platinum 4.0 houses three main editors: Matrix, or piano-roll style; Event List; and Score. As in most other sequencers such as Opcode's Studio Vision Pro or Steinberg's Cubase, you can modify data in these editors. But in Logic Audio, you can use the Parameter window settings to make nondestructive changes and hear your edits, keeping the original performance. The days of trying out a quantize style, undoing it, trying another, and undoing it again are over—no more making one small keystroke and losing your timing nuances. If you like the result, you can make all the changes permanent. All the editors, including Audio Editor and most of Logic Audio's other windows, have local menus, so the main menus don't get overwhelmingly

ENVERB, ONE OF THE 31 GREAT NEW PLUG-INS, is the first processor to define the envelope of a diffuse reverb so precisely.



USE LOGIC AUDIO'S 500 PROGRAMMABLE KEY COMMANDS to work faster. Access the items with a bullet in front of them with a key command. A search engine can find the functions or keys you need.

of data always begins in Environment. It then goes to the Arrange window, where you record and arrange sequences and digital audio (you may modify these using editors—more on that later). The signal goes back to Environment for mixing and finally gets routed to the gear in your studio.

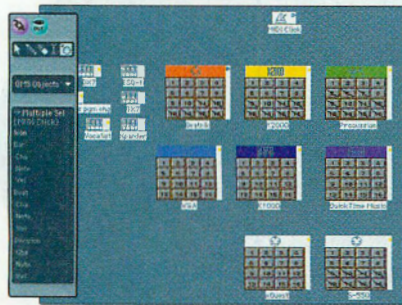
You also define instruments and devices in Environment, as well as audio regions and sequences, all of which Logic Audio calls Objects. When selected, each Object has a parameter box where you adjust its settings. If your song gets bogged down with too many tracks, organize a group of them, such as drum tracks or vocal parts, into a folder. That folder appears on one track of the song. It literally becomes an object you can move or transpose. Double-clicking on the folder opens it, giving you access to any of its parts. This design is fantastic because there are no more confusing arrangement windows with so many tracks scrolling down the page that you can't figure out what you're working on. In Logic Audio, you switch the position of the bridge, then add a chorus; it's a snap when all of your parts are linked together.

Besides the unique interface design, the backbone of Logic Audio Platinum 4.0 is Screensets. There are so many ways to view and deal with data that it's impossible to see them all at once. Imagine having a bank of up to 90 monitors on which to view Logic Audio.



Setting Up Screensets

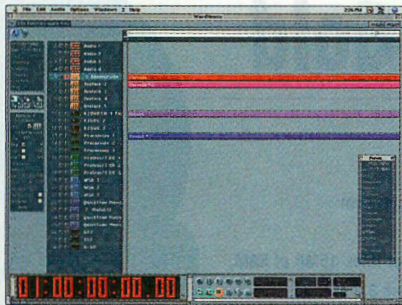
Once you've set up your hardware in Logic Audio, record or import a small MIDI file and assign Instrument Tracks in the Arrange window. Then press number 7. We're ready to make some Screensets!



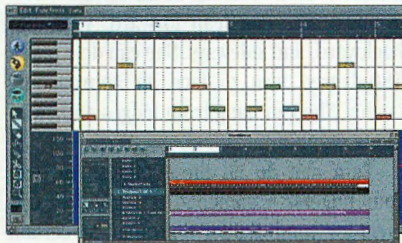
1 Size the Environment window to fit your screen. From the Layer pop-up menu, choose the layer where you see your MIDI instruments. Select Multi-Instrument (the square with 16 subchannel boxes). Click the Channel numbers in the box to enable or disable the subchannels you want to use. In the View menu, choose Set Object Color. This helps identify instruments when you see them in the Arrange Page Instrument pop-up menu. Press another number. Your last window gets saved, and when you press 7 again, it will show up.



3 Type 3 to open the Score window. Size and drag it to the bottom of the screen. Choose Track Mixer from the Windows menu. In the Mixer's Local Tracks menu, deselect everything except MIDI Tracks. Open a Transport window. In the pop-up menu, select Control Switches Display. This makes the transport small. Drag it to a convenient location.



2 Type 1 and the Arrange window appears. Size it to fit your screen. Click and hold the icon in the track list, and choose an instrument you've defined. Repeat this for all the instruments you want displayed. Choose Transport twice from the Windows menu, and arrange both Transports at the bottom of your screen. Click and hold the triangle at the bottom right of the first Transport to select Giant SMPTE Display. Double-click Qua in the Parameter box at the top left of the screen. This brings up an extended Parameter Box. Place it at the right side of your screen, as shown.



4 Type 6 to open the Matrix window. In the View menu, select HyperDraw and Note Velocities. This opens the Hyper Editor, where you can draw and adjust controller values. Click the ends of the Telescope icons to zoom in and out horizontally or vertically and set the working area display. Next open an Arrange window and size it.

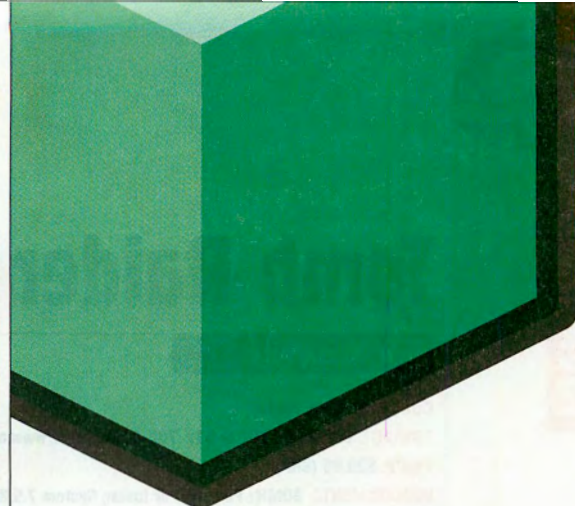
long and they keep functions where you need them—a superb feature. Emagic has definitely refined Logic Audio's interface to give the composer unmatched efficiency and intelligent time-saving tools.

The power of this highly complex and exhaustive app comes at a price, though. The learning curve is steep, even for audio pros proficient in other apps. Fortunately, Emagic provides a detailed manual and an excellent CD tutorial, which uses QuickTime movies to show you how to use Logic Audio—and it's well worth the effort. We've never used any audio program that offered as much flexibility and high-quality performance. Pros will

definitely find they can work faster and with more control than ever before. In sum, if you're a digital studio musician and would like to work smarter, then Logic Audio is for you.—*Judy Munsen*

GOOD NEWS: Highly versatile professional sequencer. Sensational high-resolution audio editor with up to single-sample resolution in display.

Useful and innovative DSP plug-ins. Easy-to-use notation. Ingenious Screensets facilitate navigation of complex interface. 24-bit support. Excellent manual and tutorial. **BAD NEWS:** Extremely high learning curve.



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Tomb Raider Gold

FUN & GAMES

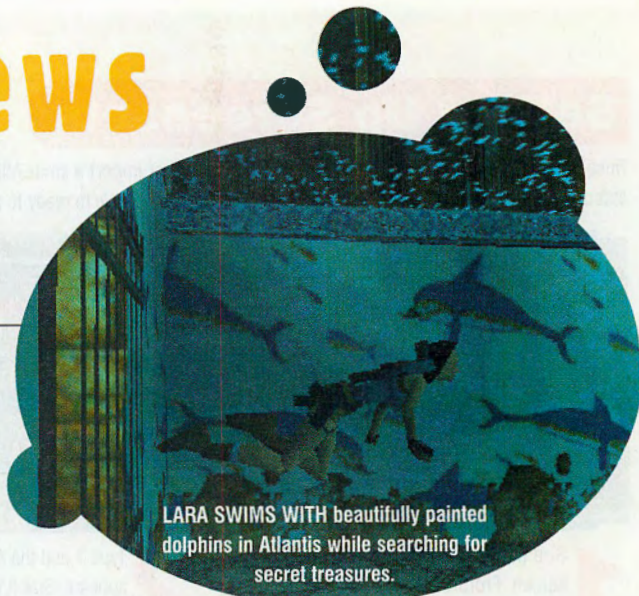
COMPANY: Aspyr Media

CONTACT: 888-212-7797 or 512-708-8100, <http://www.aspyr.com>

PRICE: \$29.95 (SRP)

REQUIREMENTS: 80MHz PowerPC or faster, System 7.5.3 or later, 16MB of RAM, 60MB of free hard disk space, 4X CD-ROM drive, QuickTime 3.0 or later

RECOMMENDED: 100MHz PowerPC or faster, 24MB of RAM, 8X CD-ROM drive, Glide or RAVE hardware acceleration



LARA SWIMS WITH beautifully painted dolphins in Atlantis while searching for secret treasures.



FIND A
TOMBRAIDER
GOLD DEMO
on The Disc.

Tomb Raider was the game that launched a thousand ships. No one can refute its historical importance to computer gaming, as it single-handedly gave birth to real-time 3D action-adventure. In the original, Lara seeks pieces of a mystical amulet in exotic locations around the world. Her adventure involves naughty aliens and a power-mad industrialist with a dark philosophy. But is this title—now in a Gold edition for Mac, with four bonus levels—still as fresh as it was with its PC debut in 1996?

If you're not familiar with how Tomb Raider works, note that it's a departure from the first-person shooter. Drawing more

from console games in which you run, jump, flip, and dodge your way around obstacles, Tomb Raider doesn't ask you to aim your guns. All you have to do is decide when to draw your weapons and when to pull the trigger. Lara aims at the closest enemy by default, and if she's doing the aiming, you can't miss—well, not too often.

What's the challenge, you ask? Mastering the complex suite of movement options available: Lara Croft can be an Olympic-level gymnast. She can leap forward, vertically, backward, and sideways. She can do a quick 180-degree turn to face an approaching enemy. She can hang from ledges and swim like a dolphin.

Lara can do all these things, but can your fingers? A gamepad is a good investment for Tomb Raider Gold. Just be certain to tweak the controls so you can control her movements smoothly and quickly. A graphics accelerator is also a must-have item for this adventure. Even a first-generation, low-end card such as a Voodoo Graphics or

Rage Pro board improves the graphics from pixelation to modern eye candy (*modern* meaning within the past two or three years, of course).

If you're a Mac gamer coming to this game fresh from Unreal or Quake 3, you'll require willpower to retrain those shooter reflexes. Don't aim. Move. Don't aim. Move. Repeat this mantra. It took us quite a while to deprogram our trigger-happy itch, but the results were worth it.

Because the action in Tomb Raider differs from that of shooters, we found the gameplay only moderately challenging from a combat perspective. Learning to master Lara's timing and acrobatic moves kept us busy, however. The two-level add-ons—Unfinished Business and The Shadow of the Cat—offer alternative endings and are more difficult than Tomb Raider itself. The game rewards your precision timing, though, as Lara revisits those alien scumbags and blasts 'em away.

We can't recommend Tomb Raider to game players who haven't already cultivated a taste for mixed action and adventure. Furthermore, the third-person perspective is both cool and annoying. While it breaks conceptual ground, all too often the camera leaves you looking at everything but the action. Having a quick finger on the Look button helps, but that's just one more thing to worry about in a fight. Still, the Gold edition is a good buy.—*Ed Carmien*

Raiding Cheats from the Lost Arc

To arm Lara with all available weapons, along with tons of ammo, depress the walk button and step forward, then backward one step. Turn three times to the right smoothly and without stopping (turning a bit past a third full turn is OK). Immediately jump backward and you'll hear a gun cock. To skip to the next level, use the same trick, but jump forward instead of backward at the end.

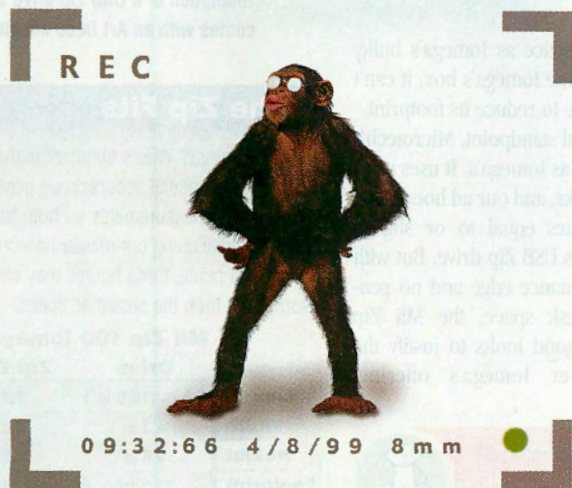


IN ONE OF THE MOST MEMORABLE SCENES in computer gaming history, Lara meets a T-Rex and must fight to live.

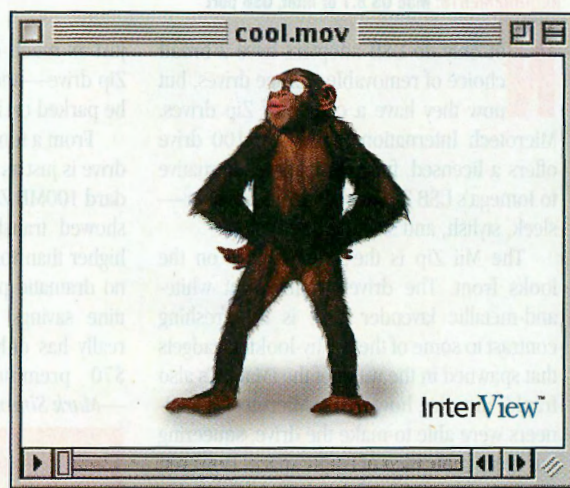
GOOD NEWS: More Lara. Mac gamers get to enjoy the beginning of Lara's saga. Runs well on older PowerPC-based machines. A scary T-Rex when you least expect it. Comes with an expansion pack (four bonus levels). Good value for price. **BAD NEWS:** The game engine and graphics have aged. Lara's ponytail doesn't move. No multiplayer.



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reviews

Mii Zip 100

HARDWARE

COMPANY: Microtech International

CONTACT: 949-855-7500, <http://www.microtech-pc.com>

PRICE: \$199 (SRP)

REQUIREMENTS: Mac OS 8.1 or later, USB port



THE GORGEOUS LAVENDER
Mii ZIP 100 is an elegant implementation of a USB Zip drive and comes with an Art Deco adapter.

Not only do USB adopters have a broad choice of removable-storage drives, but now they have a choice of Zip drives. Microtech International's Mii Zip 100 drive offers a licensed, fully compatible alternative to Iomega's USB Zip drive, and it's a looker—sleek, stylish, and strikingly compact.

The Mii Zip is the clear winner on the looks front. The drive's transparent white-and-metallic lavender case is a refreshing contrast to some of the trashy-looking gadgets that spawned in the wake of the iMac. It's also frankly amazing how teeny Microtech's engineers were able to make the drive, squeezing out every cubic inch of empty space. However, the compact profile of the drive is somewhat negated by the bulky Art Deco USB adapter, which adds almost four inches to its length. Factoring in the adapter, the Mii Zip takes up

just as much desk space as Iomega's bulky Zip drive—and, unlike Iomega's box, it can't be parked on its side to reduce its footprint.

From a functional standpoint, Microtech's drive is just as good as Iomega's. It uses standard 100MB Zip disks, and our ad hoc testing showed transfer rates equal to or slightly higher than Iomega's USB Zip drive. But with no dramatic performance edge and no genuine savings in desk space, the Mii Zip really has only its good looks to justify the \$70 premium over Iomega's offering.

—Mark Simmons

GOOD NEWS: Good performance.

Slender, gorgeous case. Dainty AC adapter. **BAD NEWS:** Pricier than Iomega version. USB adapter negates space savings. Can't be placed on its side.



If the Zip Fits

Who's slimmer? Who's trimmer? In the interests of experimental accuracy, we generated dimensional measurements for both flavors of USB Zip drive using our master benchmarking ruler. As a result, these figures may vary somewhat from the published specs.

Mii Zip 100 Iomega USB

	Drive	Zip Drive
Length	6.3 in (10.0 in*)	7.1 in
Width	4.3 in	5.3 in
Height	0.8 in	1.5 in
Footprint	27.1 in ² (~35 in ²)	37.6 in ² (10.7 in ² on side)
Weight	10 ounces	15 ounces

*with USB adapter

Iomega Zip 250

HARDWARE

COMPANY: Iomega

CONTACT: 800-697-8833, <http://www.iomega.com>

PRICE: \$199.95 (SRP)

REQUIREMENTS: Any Mac with a SCSI port (PowerBooks require a converter), System 7.0 or higher, 8MB of RAM, 30MB of free hard disk space, 2X CD-ROM drive

THE ZIP 250 LOOKS PRETTY COOL but its trunk capacity is falling behind the curve in today's gigabyte-drive showroom.



Iomega's external SCSI Zip 250 sports a new case that reflects a certain trend in industrial design. Like recent automobiles, the Zip 250's shell looks sleek yet rotund, expanding well beyond the original Zip drive's boxy Volvo-like exterior. But the real difference is the Zip 250's larger capacity—250MB (though it accepts 100MB Zip disks). However, in the era of gigabyte storage and cheap drives, the Zip 250 doesn't offer a whole lot of value.

The good news is that the Zip 250 performs well. In our tests with a beige G3 file copying was almost twice as fast as with the Zip 100. Also on the plus side, the 250MB Zip disks make backing up your system

much easier. Mac OS 8.5's System Folder ballooned past 100MB—one standard Zip disk doesn't cut it anymore. The final positive is that the Zip 250 handles regular 100MB Zip disks perfectly, which helps those committed to the Zip format.

The bad news is that the Zip 250 fails to marry price with speed and capacity. In comparison to Castlewood Systems' 2.2GB Orb, which costs the same but copies at speeds up to 12 MBps (see *Reviews*, Aug/98 p70), the Zip 250, which copies at a maximum 2.4 MBps, simply isn't fast. Furthermore, backward compatibility only goes so far; the original Zip drive can't handle the 250MB Zip disks so you're starting over anyway. If

you're trading files with friends or service bureaus, you're stuck using 100MB Zip disks, which resigns the Zip 250 to personal backups. In that arena, the 2.2GB Orb and Iomega's own 2GB Jaz (\$349) trounce it. If you're dying for the new look, take the Zip 250. For the rest of us, though, there are bigger solutions.—Jennifer Ho

GOOD NEWS: Updated case design.

Larger-capacity 250MB disks for backups of your bloated System Folder. Almost twice as fast as the original.

BAD NEWS: 250MB Zip disks aren't compatible with original Zip drives. Capacity is too small for the asking price.



reviews

MacTuner 2.0.7

COMMUNICATION

COMPANY: Trexar Technologies

CONTACT: 831-636-7568 (e-commerce provider), <http://www.mactuner.com>

PRICE: \$22.95 (SRP)

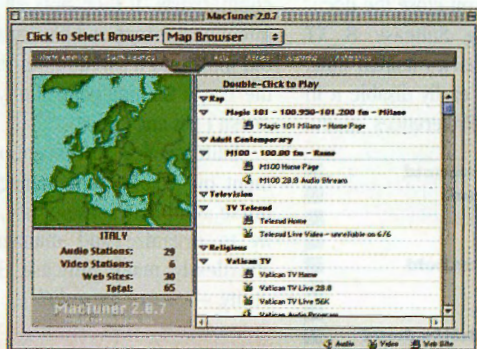
REQUIREMENTS: 68040 or faster, System 7.5.3 or later, 16MB of RAM (24MB recommended), 3MB of free hard disk space, Internet connection, RealAudio Player installed (version 5 or higher including RealPlayer G2)

MacTuner is a nifty little app that serves as a media player, allowing you to enjoy RealAudio- and RealVideo-based streams over an Internet connection. At the heart of MacTuner 2.0.7 is a database of approximately 1,500 domestic and international radio and TV stations, a list that continues to grow. Also, you can use MacTuner's built-in search engine to browse stations by musical genre or station format.

MacTuner 2.0.7's interface consists of a Map Browser, Search Engine, and Favorites; you'll spend most of your time in the Map Browser, which displays the seven continents, each in a tabbed window. Click an individual country on the map, and a list of its stations appears in an adjacent window. Just double-click on a station to play the audio or video stream. MacTuner requires RealNetworks' RealAudio Player to run, and if you use RealPlayer G2, you can listen to international tunes in stereo. In sum, MacTuner is the best way to find real-time international broadcasts, short of buying a \$100 short-wave radio tuner.

Because of Internet congestion, the reception of streaming broadcasts varies greatly in quality. However, with a dial-up 33.6 or 48 Kbps connection, we were able to listen to stereo broadcasts from countries as far away as Russia, with some congestion and buffering here and there. Off-hours were much better, of course, for our tuning efforts. You can listen to international broadcasts without MacTuner by downloading RealAudio content from individual Web sites, but if you want to save time, then MacTuner 2.0.7 can help you tune in.—Jennifer Ho

MACTUNER TUNES YOU IN to around 1,500 content-streaming stations broadcasting over the Internet.



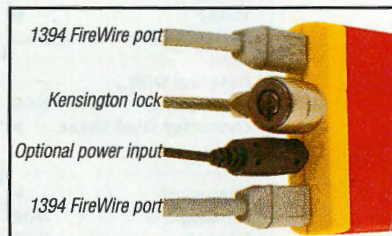
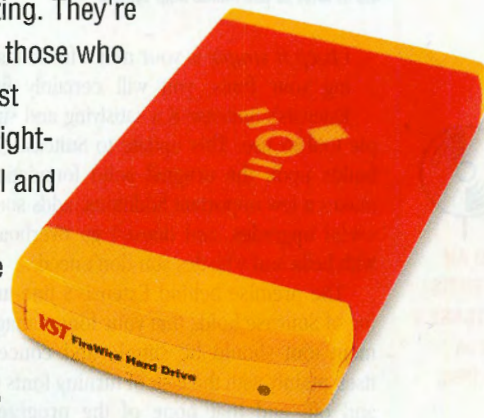
GOOD NEWS: Lots and lots of domestic and international stations from which to choose. Easy to use and to navigate. Database is updated regularly. Inexpensive one-time purchase fee. Broadens your horizons. **BAD NEWS:** No support for streaming QuickTime yet. Internet congestion can try your listening patience.



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Suitcase 8

UTILITY

COMPANY: Extensis

CONTACT: 503-274-2020, <http://www.extensis.com>

PRICE: \$89.85 (SRP), \$39.95 upgrade, \$49.95 competitive upgrade

REQUIREMENTS: PowerPC, System 7.5.5 or later, 4MB of application RAM, 4.5MB of free hard drive space, QuarkXPress 3.32 or later to use Suitcase 8 XT, Netscape Navigator or Microsoft Internet Explorer 4.0 or later to use online help system

If *keep it simple* is your motto for managing your fonts, you will certainly find Extensis's Suitcase 8 a satisfying and simple tool to use. This update to Suitcase 3.0 builds upon the original solid foundation, makes a few important additions, adds some useful upgrades, and doesn't go overboard with bells and whistles you don't need.

The premise behind Extensis's fine-tuning of Suitcase holds that your font management tool should be simple and concern itself mainly with the task of turning fonts on and off, and that none of the program's additional features should interfere with that basic functioning. With the improvement of some of Suitcase's original features and the addition of great new tools, Suitcase 8 attains its goal and remains an easy, effective way to manage and organize your fonts.

Improvements to the previous version of Suitcase include the ability to open fonts tem-

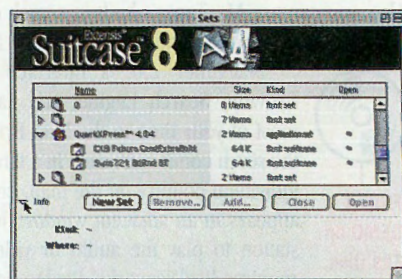
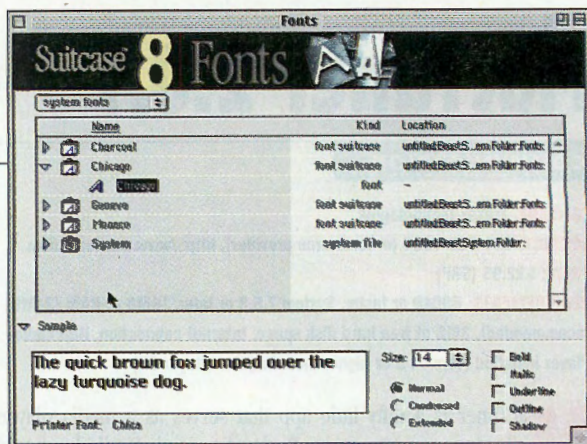
porarily by simply dragging and dropping them onto the Suitcase icon. Suitcase also has drag-and-drop capabilities available for reorganizing and adding fonts to sets. A WYSIWYG font menu control panel, Suitcase 8 MenuFont, is a system extension that gives you the ability to show fonts as they really appear in an application's font menu. MenuFont also groups your fonts in hierarchical menus by family, and indicates whether they are PostScript, TrueType, bitmapped, or Multiple Master fonts. It can also display a specific font such as Dingbat or Symbol by name instead of in WYSIWYG mode.

Important new features in Suitcase 8 include compatibility with Mac OS 8.5 and 8.6, and AppleScript support for all of the operations available in the application. Suitcase 8 XT, a font activation XTension, gives Suitcase the ability to look for and activate fonts, as well as indicate any that are missing when you open a QuarkXPress document.

This includes fonts used in embedded EPS files; the Xtension then turns off those fonts when you close the document. Using Suitcase 8 XT increases Quark's launch time, but you can easily disable it in the Quark Preferences menu,

Suitcase displays fonts in WYSIWYG and groups them by family in the application's font menu.

THE FONTS WINDOW SHOWS SUITCASE'S CONTENTS, the related printer font, and a type sample.



CREATE APPLICATION-SPECIFIC FONT SETS by dragging the application icon into the Suitcase 8 Sets menu.

and Suitcase 8 XT still gives you a display of the missing fonts to find and open by hand.

FontAgent is by far the coolest addition Extensis made to Suitcase 8. This standalone program searches your disks for fonts, verifies their integrity, gets rid of duplicates, identifies unmatched fonts, and pairs screen fonts with their PostScript counterparts. It then puts all of your fonts into a neat, organized library and places the old fonts into a saved folder or directly into the Trash. Gaining control of your fonts just doesn't get any easier.

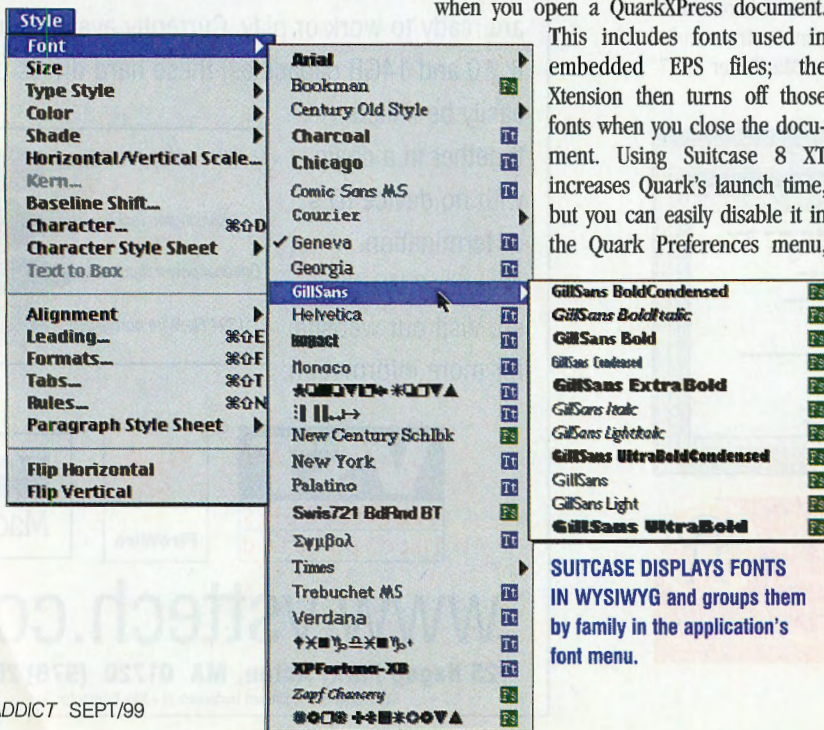
Suitcase 8 is an exceptional improvement on a solid font management workhorse. Simplicity, ease of use, and the ability to organize and manage your fonts effortlessly make Suitcase 8 a dynamite utility. —Susan Meredith

GOOD NEWS: Retains the look and familiar functions of the original Suitcase and adds some great new features. AppleScript support. WYSIWYG font menu.

BAD NEWS: Waiting for Suitcase to launch, find, and open QuarkXPress fonts can be a bother.



FIND AN
EXTENSIS
SUITCASE 8
trial on
The Disc.



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power play

Gather 'round, you antiterrorist folks, and learn something!

Tom Clancy Talks Rainbow Six

by Robert Capps and David Reynolds

Tom Clancy, the man behind a plethora of the most accurate—and chilling—political thrillers in the world, has another side: that of game developer. The game *Rainbow Six* (based on the novel of the same name about a rapid-response antiterrorist organization) made a huge splash on the PC side of the gaming world last year with its complex tactics and realistic gameplay. Now, thanks to MacSoft and Red Storm Entertainment, it's on its way to the Mac (it should be out not long after you read this) and we're bringing

you a sneak preview and an exclusive interview with Tom Clancy.

MACADDICT:

Maybe you can start with a little bit about how Red Storm Entertainment was founded and what your role is.

TOM

CLANCY: It started off because of an investment I had with Virtus Corporation. We got together and decided to set up a game company, which I thought would be a fun thing to do. I went over to England to get my friend Doug Littlejohns to come over and run it. Took me six months, but I kidnapped him and brought him over here, and now he runs

the company for me. He's doing damn well at it.

MA: So what's your role?

TC: I'm a chairman. You know, I just sort of show up once in a while and smile at the troops. I work. We sit around and talk about game ideas and tweaking the ideas, and I help a little in the development and conceptual sense.

MA: Let me ask you, because I've only read a chapter or so, what's the story behind *Rainbow Six*?

TC: *Rainbow Six* is the first book I've ever done that started off with somebody else's idea. We

had our first get-together before the company even started operations, in Williamsburg, back in 1996, I guess. We were kicking around game ideas. The idea for a counterterrorist group came up, and it perked my ears up a little bit. I was thinking *book* before we even had the game set in place. I started the book, called it *Rainbow Six*, and the game grew up around that.

MA: And so the game and the book evolved together?

TC: Yeah, they sort of grew up together. I'd fly down to North Carolina, and we'd sit on the back porch of the building we were in and kick around ideas. And that's where I came up with most of the plot by myself, talking with these kids.

About the Game

In *Rainbow Six*, you play the leader of a multinational antiterrorist task force. Your job: Assault terrorist installations, free hostages, and make the world a safer place. Gameplay revolves around planning and executing individual missions. After a mission briefing, you put together your team by choosing from a pool of highly trained specialists, whom you then equip.

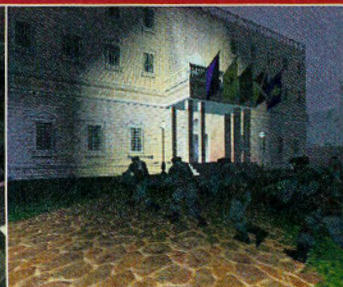
Team members also have personality traits, as well as special skills.

Once you're done team-building, you plan how the mission will unfold using a 3D map, and then the assault starts. Your team is on the ground with you, and you can order them around.

Although at its heart *Rainbow Six* looks a lot like a first-person shooter, if you try to

play it like one, you'll lose—fast. Remember, realism is the watchword for this game, and a single shot can take you out. Instead, tactics and strategy are king here, so don't run around blasting everything in sight.

Rainbow Six features both single-player and multiplayer modes. While the single-player mode is fun, the cooperative mode is where *Rainbow Six* really rocks. —DR



MA: What's the story line?

TC: Rainbow Six is an international NATO counterterrorism group based in England, because England's a good place to get in and out of.

MA: Have you played the game much?

TC: Only down at the shop. I don't really have the time or expertise to play video games. For me it's a lot more fun to design them than it is to play them.

MA: Do you have a favorite aspect of how the game came out? Is there something you're especially proud of, having your name on it and all?

TC: If my name's on it, it has to be realistic.

MA: So how do you address concerns of violence in the games?

TC: This game is not about killing people. The game is about rescuing people. You win the game not by killing all the demons out of hell. You win the game by rescuing lots of innocent people. That's the focus of the game. That's not the same as

Doom or all those other mindless shoot-'em-up games.

MA: You're an Apple Master, correct?

TC: Yeah, I'm part of the Apple Masters program. God knows why. I'm by no means a high-end computer user.

MA: So what do you think of Apple's latest round of computers?

TC: Well, they've given me a couple, and they're pretty good.

MA: Do you still use a Mac to work on your novels?

TC: Oh, yeah, absolutely. I'll never use anything but a Mac.

MA: Do you like the energy in Apple Computer now?

TC: Yeah, Apple's turned the corner, I think. They'll be doing some stuff later this year, which I've heard about, that's going to be fairly interesting.

MA: So when your game came out, PC first and Mac later, did that bum you?

TC: It was kind of disappointing for me, but that's the way it goes.

MA: Right.

TC: It's a business decision, because unfortunately Mac is not a really large fraction of the market yet. That'll change, but it hasn't changed yet.

MA: Do you see a time when your novels and games will merge even closer?

TC: What we're trying to do here is essentially create a new art form, and that's something that doesn't happen very often. Up until now, whether you were an epic poet talking around a campfire or a novelist or a playwright or a guy doing a script for Hollywood or NBC, you were essentially telling a story the same way. You present the story to your audience, and your audience either likes it or doesn't like it. With the emergence of computer technology, what we're going to see, and what we're going to help create at Red Storm Entertainment, is an art form in which the audience can affect and live the game as part of it, not simply observe it.

MA: How did you manage to develop such great contacts within the military?

TC: Oh, I'm a spy. No—the militaries, they're full of people, and they're all American citizens, and they're hard-working guys. And I tell the truth about them, and that makes you friends.

MA: How did you become interested in military intelligence?

TC: It's a lot more interesting than the sexy, exciting life of an insurance agent, which is what I used to do. I've always been interested in what shapes the world. What shapes the world unfortunately to this point has been war, although it looks like we've just about turned the corner on that. As the world evolves, I think most of my interests in war will become retrospective rather than prospective. However, my interest is simply to say that's how history is made, and I've always been a history buff.

MA: Are you excited to see Rainbow Six coming to the Mac?

TC: Oh, definitely, yeah. Maybe I'll break down and play it this time.

power play

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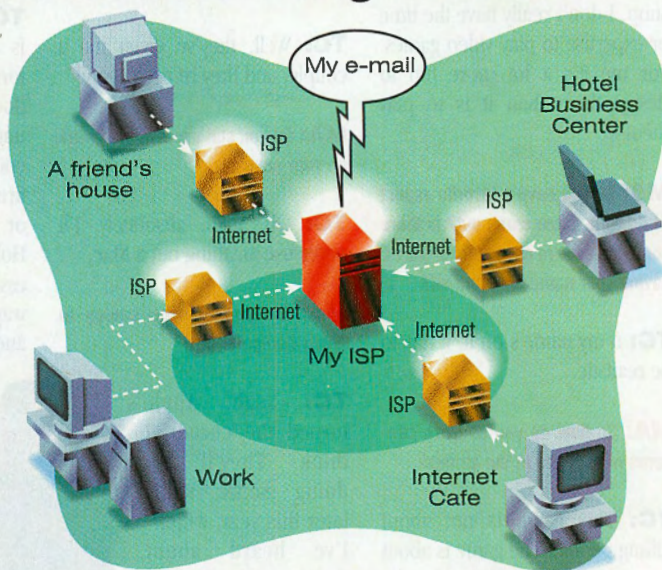
by Joseph Holmes



When traveling around the world, or around the country, or even around town, you want to access your email. You *need* to access your email. The problem is you don't want to lug (or pay for) a PowerBook, and travel-friendly Internet providers like AOL...well, they suck. Fortunately there is another option.

All it takes is a little tinkering, and you can force someone else's Internet connection and email program to grab your mail from your ISP's servers. The same principle applies if you want your home email client to check your work email (or vice versa). Best of all, it's fantastically easy to get email-switching savvy.

In this how-to, we'll show you the complete step by step for logging onto a foreign Mac, reconfiguring the settings to your own personal needs, and slipping away completely undetected. You can also do the same things on a PC, but we're not gonna talk about that. Once you've done this, you're fully equipped for travel, working from home, or writing love letters from work. Follow along and you'll never again miss an electronic missive, from the poolside or the West Side.



LOOK FOR AN INTERNET-CONNECTED COMPUTER AT:

- A friend's house. • The local public library. • An Internet cafe. • The business center of a large hotel (which typically charges by the minute). • The local Mac users group. • A copy shop such as Mailboxes Etc. or Kinkos.

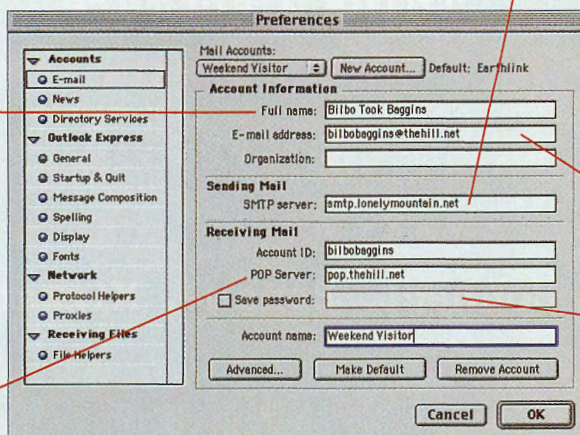
Illustration by Mary Baumann

Info You Must Have

Before you call the taxi to the airport, there are precisely five details you must memorize (or at least write down). Open up your main email client application's setting dialog box (see Step 1 for locating your email clients' settings) and retrieve the following information:

1 USER NAME. This is the clever screen name you use with your ISP. In our example we're bilbobaggins, making our email address bilbobaggins@thehill.net

2 POP MAIL SERVER ADDRESS. Your ISP's POP mail server receives incoming email and holds onto it. A POP mail server gives your email to anyone, logged onto any computer, anywhere, in exchange for your user name and password.



3 SMTP MAIL SERVER ADDRESS. Your ISP's SMTP mail server accepts the email you compose and passes it along to the addressees. Some SMTP servers will not pass along email that originates from another ISP. We'll show you how to get around that.

4 REPLY-TO ADDRESS. This is simply your email address, provided here so people who get your messages can use their nifty reply-to function.

5 YOUR PASSWORD. Shhhhh!

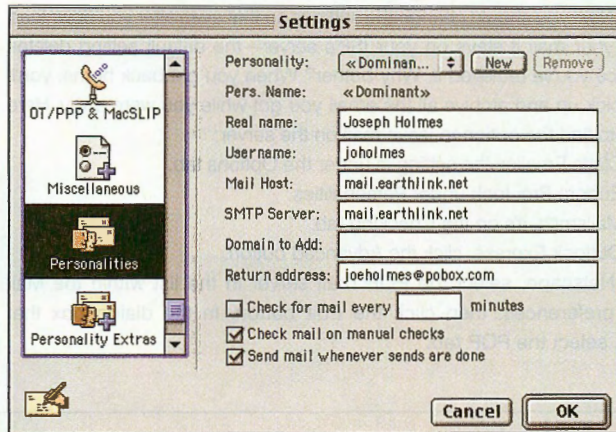


FIND DEMOS OF EUDORA, Mailsmith, Outlook Express, and Netscape Communicator on The Disc.

1 Open Email Settings

Open the Mac's email client application. Odds are it's Claris EMailer, Microsoft Outlook Express, Qualcomm Eudora Pro, Bare Bones Software Mailsmith, or the Messenger module of Netscape Navigator or Communicator. Once you find one of these and launch it, find the email account preferences settings. Here's where they reside in the most recent versions of these apps:

- In Claris EMailer, select Accounts under the Setup menu.
- In Eudora Pro, select Settings under the Special menu and scroll to Personalities.
- In Mailsmith, select Email Accounts under the Windows menu.
- In Outlook Express, select Email in the Preferences dialog box.
- In Netscape Navigator, first launch the User Profile Manager application (found in the Netscape Communicator folder) and create a new user profile. You don't need to fill in all the details at this point. Instead, skip them, let Netscape launch, and open Netscape Communicator's Preferences. Then select Identity under the Mail And Newsgroups heading.

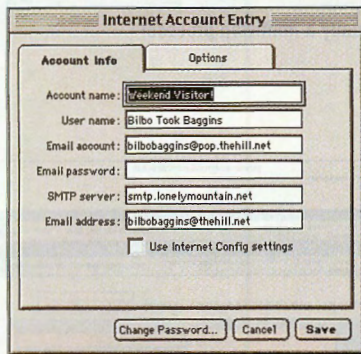


IN EUDORA PRO, you'll find email account settings stashed under the topic Personalities.

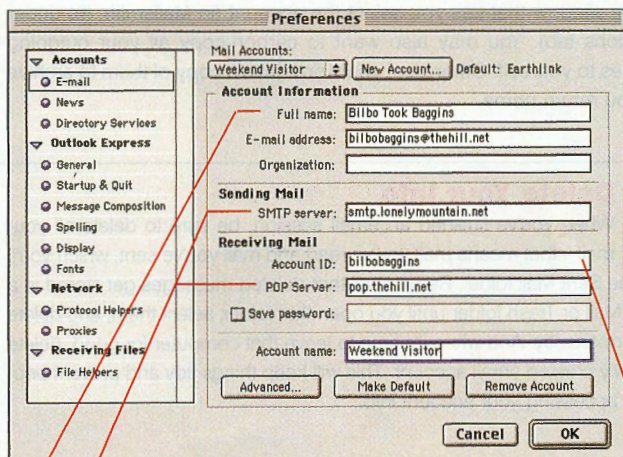
2 Enter Your Info

Click the New or New Account button to create a new email account for yourself, and enter your information. Never enter your password in the account information. The mail client asks for your password each time you log on so that no one else can access your email. For Netscape Communicator, you'll need to look in both the Identity and Mail Servers sections of the Preferences to enter all the info.

As a spam prevention measure, many Internet service providers refuse to forward email originating from another ISP. This means you may not be able to use your own ISP's SMTP address when you log on from someone else's ISP. But you can use this simple trick: Check the SMTP address of another account on the computer you're using—hopefully the SMTP address for the ISP you're logged onto—and use that address instead. If you are checking your work email from home, just leave your home SMTP setting in place for sending mail.



CLARIS EMAILER DOESN'T label the boxes very clearly. Put your real, human name under User Name, and combine your user name and POP mail server address in Email Account.

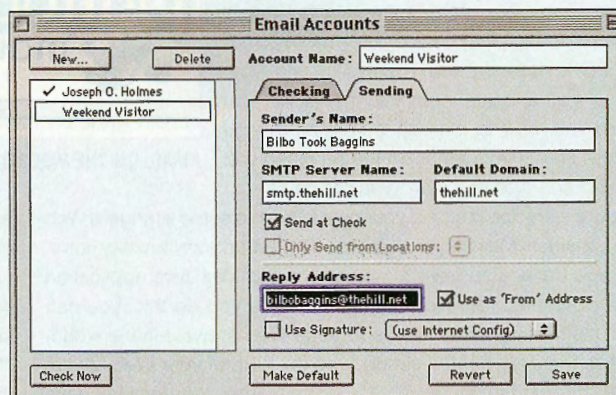


- 1 "FULL NAME" is your actual, real human name.
- 2 ACCOUNT ID or USER NAME is the name you use to log onto your email account, such as joholmes21 or bilbobaggins.
- 3 Fill in the POP and SMTP server addresses, which you wrote down before you left home.

3 Set the Reply-To Address

Next you want to be sure the replies to emails you send from the remote computer get routed back to you. To do this, you need to fill in the Email Address, Reply Address, or Return Address setting with your full email address—for example, bilbobaggins@thehill.net.

IF YOU FORGET the Reply-To address, your friends' replies may go to the owner of the Mac, not you.

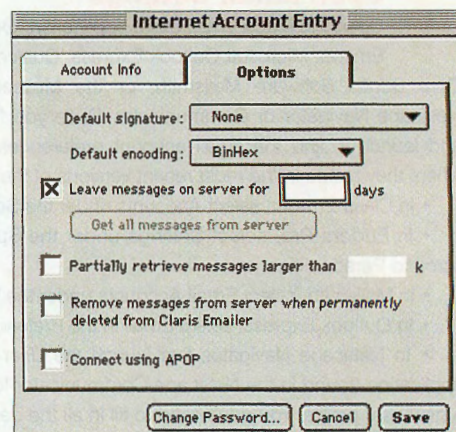


4 Leave Messages On The Server

Next you should change the settings so that even after you download your mail it stays on your ISP's server—the default setting deletes email once you've retrieved it. Why bother? When you get back home, you'll want to pick up and archive all the email you got while you were away. Here is where to find the option to leave mail on the server:

- In Claris EMailer, the setting is under the Options tab.
- In Eudora Pro, look under Personalities.
- In Mailsmith, it's on the Checking tab.
- In Outlook Express, click the Advanced button.
- In Netscape, select the POP mail server in the list within the Mail Servers preferences, then click the Edit button. In the dialog box that appears, select the POP tab.

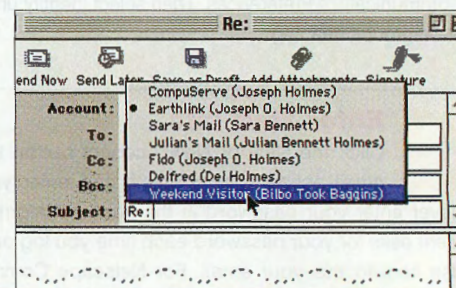
**LEAVE EMAIL
ON THE SERVER
or kiss it good-
bye forever.**



5 Check Your Mail

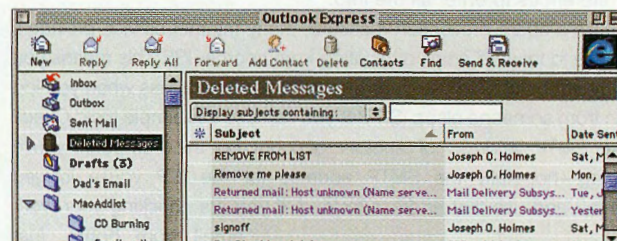
Now log onto the Internet and use your new account to check your mail. Read, reply, and create new messages just as you normally do. Be sure you're sending mail from your own email account, not your friend's. In every email application, there's a pop-up menu in the New Message window that lets you select the account (in Mailsmith, it's under the Options tab). You may also want to carbon-copy all your outgoing messages to yourself. Otherwise, you won't have a copy of them to archive when you return home.

**IF YOU DON'T
CHANGE THE
DEFAULT
ACCOUNT, you'll
be sending
email from the
Mac owner's
address.**



6 Delete Your Info

When you've finished an email session, be sure to delete all your mail—that means mail you've read and mail you've sent, which you'll find in the Sent Mail folder. Remember that deleted messages get stored in a Deleted Mail or Trash folder until you open that folder, select them, and delete them permanently. And when it's time to leave that computer for good, delete your newly created email account. This will keep things tidy and prevent people from accessing your account info.



DELETING YOUR EMAIL is actually a multistep process!

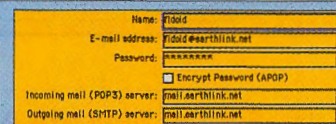
Check POP Mail with a Web Browser!

You're sitting at a computer in the local public library, but there's no email client on the stupid thing, and besides, it's a Windows machine! No problem—you can check your email from any Internet-connected computer in the world at PandaMail (<http://www.bstar.net/panda/mailman.cgi>). Simply type your user name, email server POP address, and password, and your incoming mail appears in an informative list. You can read and reply to messages from here, and PandaMail leaves your email on the server so you can collect and archive it when you get home.

If you're leery about typing your password into some stranger's Web page, consider Mainstay's JustMail (\$40, <http://www.mstay.com>). Before you travel, you have to upload the JustMail Java application into your personal ISP Web space, but once you do this, you can access JustMail from any Java-equipped Web browser in the world. To access the Java applet, simply type the URL of your Web space, followed by justmail/justmail.html. After the JustMail Java



EMAIL ON THE WEB? Start here.



FROM HERE, PANDAMAIL is as simple as click and read.

app loads, type your user name, email address, password, and POP and SMTP server addresses into the text boxes, and your email appears in a handy-dandy list format. A word of warning, however: Test JustMail before you leave home. Due to a technical wrinkle, some ISPs are not compatible with JustMail. If you get a Java error, it's likely your ISP won't work with JustMail. Try it out with a demo of the application.

With the top down, the only sound you'll hear
is the whining of the designers who came in second.



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how to

Turn your PowerBook Into an External Hard Drive

By Owen W. Linzmayer



Those of us who mildly man-nerly tote PowerBooks by day but morph into supped-up, frame-rate obsessed desktop junkies at night share a common struggle: finding the best, most efficient way to get files from PowerBook to Desktop. We toil with Ethernet, slave over LocalTalk, and labor with Zip discs and, yes, even floppies. But there is a little-known Mac trick that dwarfs all these techniques. You can actually hook your PowerBook directly to another Mac via SCSI for file transfers at up to five megabytes a second! Originally called SCSI Disk Mode, this feature is now also known as HD Target Mode and Target Disk Mode in deference to PowerBooks with internal ATA/IDE (Advanced Technology Attachment or Integrated Drive Electronics) drives. For simplicity's sake, we'll stick with the term SCSI Disk Mode throughout this article. No matter what you call it, this is one cool feature that hasn't gotten the attention it deserves, which is a shame



It's not Ethernet and it's not LocalTalk—these Macs are hooked via SCSI, and it's fast. No more transferring files at the speed of molasses.

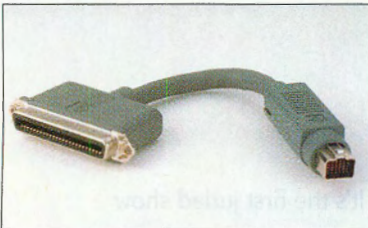
when you consider its easy implementation and useful application.

All PowerBook models except the PowerBook 140, 145, 145B, 150, and 170 can be used in SCSI Disk Mode (a MiniDock is required for use with a PowerBook 200 or 2300). Once placed in SCSI Disk Mode, a PowerBook can be connect-

ed to any Mac that has an external SCSI port (most models since the Mac Plus, including PowerBooks that don't support SCSI Disk Mode themselves). A PowerBook in SCSI Disk Mode basically becomes an external hard drive, albeit one with a very stylish and expensive case (none of the PowerBook's other components—CPU, serial ports, modem, etc.—are accessible). The PowerBook's hard drive icon appears on the other Mac's desktop, allowing you to copy files between all available volumes, launch applications from any disk, and even use the Startup Disk control panel to

boot the other Mac using the PowerBook's drive (but don't attempt to install or upgrade the Mac OS on a PowerBook in SCSI Disk Mode or you'll end up with components appropriate to the Mac model on which the installer was running rather than those needed for the PowerBook). And not only is transferring files through the SCSI bus mega-fast, it's easy to do, too.

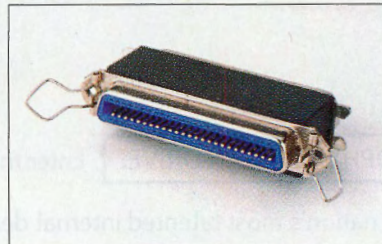
Connectors, Cables, and Terminators



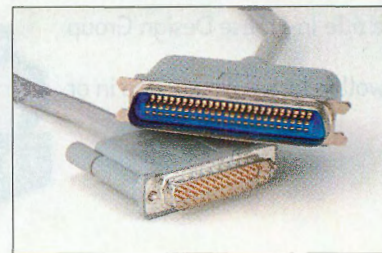
This all-important cable is called Apple's HDI-30 SCSI Disk Adapter cable (part number M2539LL/A). It's a short, dark gray cable with a male HDI-30 connector on one end and a female 50-pin Centronics connector on the other.



This is the standard Centronics-to-HDI SCSI system cable (M2538LL/A) used to attach SCSI devices to a PowerBook. It's very similar to the SCSI Disk Adapter cable except for the gender of the Centronics connector (this one's male) and one extra pin in the HDI (High-Density Interconnect) connector (which tells the PowerBook to start up in SCSI Disk Mode).



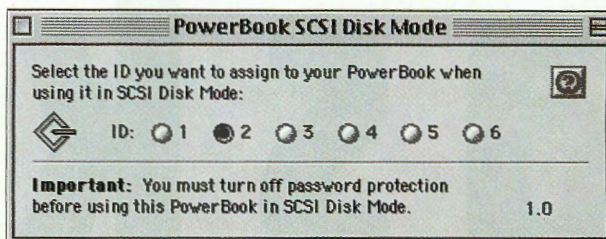
Use a standard Centronics SCSI passthrough terminator and keep the SCSI voodoo away.



You will need a Centronics-to-DB25 SCSI cable to get your Powerbook connected to a desktop machine.

1 Assign the PowerBooks a SCSI ID

Depending upon the version of the Mac OS and your PowerBook model, open the PowerBook, PowerBook SCSI Disk Mode, PowerBook SCSI Setup, or PowerBook Setup control panel to set the SCSI ID to a number not currently in use on the SCSI chain of your other Mac. If used, open the Password Security control panel and turn off password protection. Close both control panels, then choose Shut Down from the Finder's Special menu on both computers.



THE CHANGES YOU MAKE in this control panel don't affect the PowerBook's normal operation; the setting applies to SCSI Disk Mode only.

2 Hook Up the Cables

Plug the special SCSI Disk Mode cable into the SCSI port on the back of the PowerBook. If you want, plug a passthrough SCSI terminator onto the SCSI Disk Adapter cable. To tell the truth, we've successfully used SCSI Disk Mode without a terminator many times, but SCSI is voodoo and since Apple recommends a terminator, we'll stick to the party line. Next connect the HDI-30 cable with terminator to the SCSI port on the other Mac, using either a Centronics-to-DB25 cable for most desktop Macs, or a Centronics-to-HDI cable if the other computer is another PowerBook. If your Mac has a SCSI accelerator card with a different type of connector, use whatever cable and adapter is necessary.



HERE WE HAVE THE SCSI DISK MODE CABLE, the terminator, and the Centronics-to-DB25 SCSI cable hooked up. Plug the loose end into the SCSI port on a desktop Mac.

3 Fire Up the PowerBook

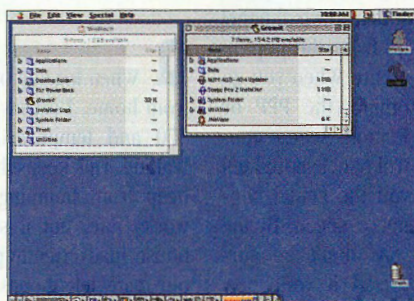
Turn on the PowerBook. You should soon see a large SCSI symbol (a diamond surrounding the SCSI ID number you specified in the first step) bounce around as a rudimentary screen saver and a reminder that the PowerBook is in SCSI Disk Mode. If you have a PowerBook 500 series computer, you may not see this icon until after the next step. It's now safe to close the screen; the PowerBook won't go into Sleep mode.



WHAT A COOL EXTERNAL HARD DRIVE we have! Your Mac will have things like Power Cables too, though.

4 Start the Desktop Mac

Turn on the other Mac. If your PowerBook automatically shuts down, you probably forgot to disable password protection. Otherwise, when the Finder appears, the PowerBook's hard drive should be on the desktop along with any other normally accessible volumes. If the PowerBook's hard drive is formatted with HFS+ and the other Mac isn't running Mac OS 8.1 or later, the drive appears as a locked volume with a SimpleText document called "Where have all my files gone?" that explains Mac OS Extended Format.



ONCE SCSI DISK MODE IS WORKING, your PowerBook's hard drive shows up on the other Mac's desktop just like any other hard drive.

5 Copy Away!

Feel free to use the PowerBook's hard drive as you would any other disk. When you're done with SCSI Disk Mode, turn off the other Mac first, then turn off the PowerBook. If you inadvertently turn off the PowerBook or completely drain the battery when in SCSI Disk Mode, the icon may remain on the other Mac's desktop, but you'll lose the ability to access its contents.



ONCE HOOKED UP you can close your PowerBook (It won't sleep) and copy away. It'll blow transferring files via Ethernet off the Map!



ask us

Modem maladies heard & cured. Plus IDE explanations & Network negotiations.

Questions?

Submit technical questions or helpful tips directly via email (askus@macaddict.com) or c/o MacAddict, 150 North Hill Dr., Suite 40, Brisbane, CA 94005.



FIND DISK-TRACKER AND A DEMO of Icona-Ranger on The Disc.

Q I recently upgraded my 28.8-Kbps modem to a new V.90 56-Kbps unit. Everything has been fine since then, except that when a connection is established, the PPP control panel now says, "Connected at unknown speed." Is there a new version of the PPP control panel that shows the correct connect speeds beyond 28.8 Kbps?

A You don't need an updated PPP control panel (called Remote Access in newer versions of the Mac OS)—rather, you must download the appropriate script for your new modem. Go to your modem vendor's Web site and locate the latest script for the model you own. Download this, decompress it, then drop it in the Modem Scripts folder inside the Extensions folder in the System Folder. Then open the Modem control panel and select the new script from the pop-up menu. When you go

online, the PPP or Remote Access control panel should tell you the actual connect speed. By the way, don't be surprised if your new 56-Kbps modem never delivers its top advertised speed. For one thing, legally the modem can't go faster than 53 Kbps, and even that is a theoretical maximum rarely reached. Something in the range of 45 to 50 Kbps is more realistic.

Q We have a PowerBook G3 we'd like to network with a Power Mac 7200, but the laptop is running Mac OS 8.1 and our desktop Mac is running System 7.6. Do we have to install Mac OS 8.1 on the 7200, or can we network them via Ethernet as they are? I don't know if this changes anything, but the PowerBook's hard drive is formatted as HFS+.

A You're in luck. Thanks to the programming geniuses at Apple, you don't have to fiddle with a thing. File Sharing operates on any Mac running System 7 or above connected to an AppleTalk network. There's no need for all the networked Macs to run the same version of the operating system. Furthermore, it doesn't matter if you're sharing a Mac OS Extended Format (also called HFS+) volume over AppleTalk; the Power Mac running System 7.6 can access all the files contained on that volume.

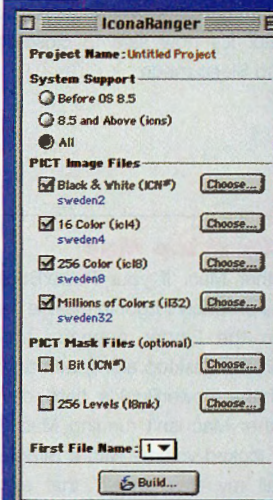
Q When logging onto the Internet from home, I set my modem to dial *70 and temporarily disable Call Waiting. This keeps the incoming call beep from bumping me offline. It works fine, but if someone in the house inadvertently picks up any of our many telephones while I'm surfing the Net, my modem drops the connection. Is there any shareware available that eliminates this problem?

A I don't think this is a problem you can solve through software. However, Radio Shack (800-843-7422, <http://www.radio-shack.com>) sells a \$9.99 device called a Voice Data Guard (model number 43-107), similar to its discontinued Telephone Line Restrictor (model number 43-445). Both of these small boxes plug into your modem's telephone line. Whenever your modem is in

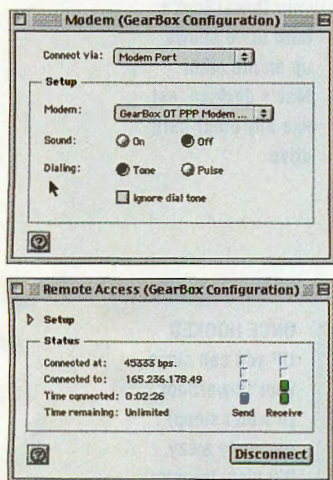
Pretty as a Picture

Back in the April 1998 issue, I recommended John McLaughlin's Iconizer as a tool for creating cool large graphics composed entirely of icons. Since then I've found a much better utility called IconaRanger from Leister Productions (717-697-1378, <http://www.leisterpro.com>). This \$39.95 commercial program creates monochrome and color versions of any given PICT file and chops it up into an array of empty folder icons. These assemble to form that image in a Finder window, regardless of color depth. Doing this by hand would take hours and drive you crazy, but with IconaRanger it's as easy as drag-and-drop. All

you need to use IconaRanger is a PICT file, System 7.5 or later, a 68030 CPU or better, and at least 2MB of RAM. Download a working demo copy (or use the one on The Disc) and see for yourself how easy it is to create great-looking images from icons for use on your personal or professional floppies and CDs.



ICONARANGER'S INTERFACE AIN'T MUCH to look at, but it's a champ at creating pretty pictures out of icons.



FOR CORRECT CONNECT SPEEDS in the Remote Access control panel, you must have the right modem script selected in the Modem control panel.

use, anyone picking up a telephone extension elsewhere in the house will hear nothing, and nothing will disrupt your data transmission.

Q Our house has one phone line, and we use a modem on it. The problem is, people have trouble getting through to us on the phone when a family member is on the Internet. I remember seeing some software advertised on the Web that would pop up an alert box when someone calls, allowing you to either ignore the call, cancel the Internet connection and pick up the phone, or transfer the call. I can't remember the name or company, but it was cheaper than getting another phone line or alternate Internet connection. Do you know where I could find this?

A There are probably other products that can do what you want, but the first one I found was HotCall from Command Communications (800-288-6794 or 303-751-7000, <http://www.command-comm.com>). Your modem, phone, and phone line all plug into this \$79.95 device. Whenever the device senses the phone company's Call Waiting tone (you must subscribe to the Call Waiting service) on the line, the box beeps and lights up, giving you the option of ignoring the call or answering the call by picking up the phone. Depending on your modem, you may even be able to pick up quickly, tell the caller you'll get back to him or her, then hang up without losing your modem connection. Command Communications also has a deluxe HotCall model that works in conjunction with an external Caller ID box, allowing you to see who is calling before deciding how to handle the interruption.

Q I have a Power Mac 7100/80, along with several PCs. I want to network everything to share printers, scanners, and the like. I have an Asanté Technologies FriendlyNet hub (800-662-9686 or 408-435-8388, <http://www.asante.com>) and all the PCs have Ethernet 10/100 cards. The back of my 7100 has a funky-looking connection port for Ethernet, and my manual says to use that. Where do I buy a cable for it? What is that called (it's neither coaxial nor RJ-45)? How fast will it be? Please advise.

A Not being familiar with every make and model Mac under the sun, I fired up my browser and headed over to the Apple Spec Database (<http://support.info.apple.com/applespec>), where Apple maintains specification data for all of its computers, past and present. A quick search and a click or two was all it took to discover that the Power

Mac 7100 has an AAUI-15 (Apple Attachment Unit Interface) Ethernet connector capable of a maximum data transfer rate of 10 Mbps. To connect this Mac to your hub, all you need is an inexpensive (around \$30) 10BaseT transceiver, such as Farallon's EtherMac (510-346-8000, <http://www.farallon.com>). This adapter plugs into the AAUI-15 connector and gives you an RJ-45 port just like your PC Cards.

Physically connecting your Power Mac to the hub is the easy part; dealing with all of the software hurdles you need to clear for sharing your peripherals with PCs is beyond the scope of this humble column. However, I won't leave you in the lurch. I recommend that you visit MacWindows (<http://www.macwindows.com>), John Rizzo's Web site dedicated to enabling Mac and Windows computers to work together. There you'll find detailed tutorials and solutions for doing exactly what you want.

Q I would like to take the information from a directory window and save it as editable text, or better still, as a spreadsheet file. I burn several CDs per month with general information on them, and I need some way of indexing the files and folders. Currently, I am printing a directory and manually typing the information into a Microsoft Excel spreadsheet. There has got to be a faster way! Please help!

A You're darn tooting there's a better way! Man, my fingers ache just thinking about all those keystrokes you've wasted. OK, first of all, did you know that you can print any directory window in the Finder? Just double-click the volume in which you're interested, make the correct choices from the View menu so everything looks as you want it, then choose Print Window from the File

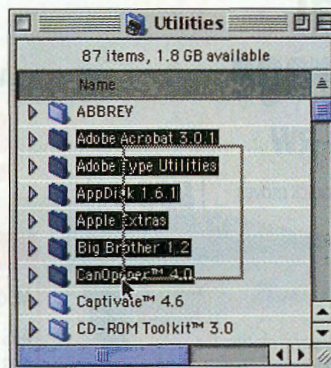
menu, and you get a hard copy of everything in the window.

If that's not exactly what you want, choose Select All from the Edit menu (Command-A), copy the selection to the Clipboard (Command-C), then paste it into your spreadsheet (Command-V). There's the editable text you wanted.

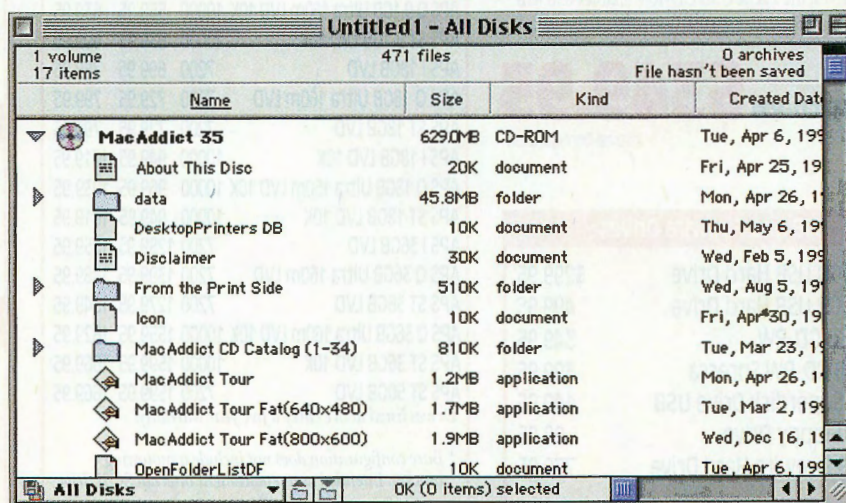
Better still, why not rely upon a program designed specifically to catalog disks? Mark N. Pirri's \$20 shareware program DiskTracker, included on every copy of The Disc and at <http://www.disktracker.com>, is a simple drag-and-drop application that easily indexes every item on a volume for fast search and retrieval. It even includes tools for creating nifty-looking labels. Check it out and start using Excel for what God intended: calculating Bill Gates' ever-growing net worth.

You'll find a sample chapter of Owen W. Linzmayer's new book, *Apple Confidential: The Real Story of Apple Computer, Inc.*, as an Adobe Acrobat PDF file on The Disc.

Owen W. Linzmayer is a San Francisco-based freelance writer and the author of the recently released *Apple Confidential* (<http://pw1.netcom.com/~owenink/confidential.html>).



IF YOU CAN GRAB IT IN THE FINDER, you can copy it to the Clipboard with Command-C.



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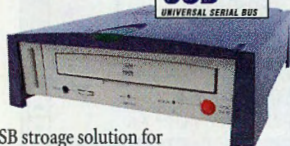
* Bare Configuration



Universal USB Storage

LaCie USB CD-RW

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The ideal USB storage solution for iMacs and G3s. This drive combines the power and flexibility of a rewritable CD drive with the hot-swappable ease of USB. Faster and larger than USB Zip and USB Superdisk drives, the LaCie USB CD-RW enables 650 MB CD production for inexpensive and easy file exchanges.

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Internal Configuration

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VST USB Floppy Drive	99.95
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APS Ultra 160m / Ultra 2 Wide LVD SCSI Drives

Model	RPM	Internal	APS Pro
APS 19GB LVD	7200	\$349.95	\$419.95
APS Q 9GB Ultra 160m L	7200	399.95	469.95
APS ST 9GB LVD	7200	429.95	499.95
APS I 9.1GB LVD 10K	10000	549.95	619.95
APS Q 9.1GB Ultra 160m LVD 10K	10000	569.95	639.95
APS ST 9.1GB LVD 10K	10000	539.95	609.95
APS I 18GB LVD	7200	699.95	769.95
APS Q 18GB Ultra 160m LVD	7200	729.95	799.95
APS ST 18GB LVD	7200	729.95	799.95
APS I 18GB LVD 10K	10000	949.95	1019.95
APS Q 18GB Ultra 160m LVD 10K	10000	969.95	1039.95
APS ST 18GB LVD 10K	10000	949.95	1019.95
APS I 36GB LVD	7200	1289.95	1359.95
APS Q 36GB Ultra 160m LVD	7200	1399.95	1469.95
APS ST 36GB LVD	7200	1279.95	1349.95
APS Q 36GB Ultra 160m LVD 10K	10000	1559.95	1629.95
APS ST 36GB LVD 10K	10000	1599.95	1669.95
APS ST 50GB LVD	7200	1599.95	1669.95

Drives listed above carry a five year warranty.

* Bare configuration does not include a mounting bracket. Intended as a replacement internal SCSI drive.

APS Ultra SCSI Drives

Model	RPM	* Bare	Internal	APS Pro
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APS Q 3GB	5400	199.95	209.95	269.95
APS ST 4GB	7200	209.95	219.95	279.95
APS I 9GB	7200	349.95	359.95	419.95
APS ST 9GB	7200	319.95	329.95	389.95
APS ST 18GB	7200	699.95	709.95	769.95

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APS 10GB ATA	5400	\$169.95
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APS 6.4GB Notebook HD	4200	349.95
APS 8.1GB Notebook HD	4200	499.95

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APS Pro Case



APS HyperDAT DDS-3

APS Tape Backup

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APS NS-20	499.95
APS HyperDAT® II DDS-2	649.95
APS HyperDAT® III DDS-3	999.95
APS HyperDAT® IV DDS-4	1,299.95
APS DLT40 DLT 4000	1,999.95
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APC Line Conditioner, R-600 APC	99.95
APC BackUPS Pro 280S APC	134.95
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F-Series Monitor 21" Sony GDM-F500	1,759.95
PS-Series Monitor 19" Sony GDM-400PS	699.95
PS-Series Monitor 21" Sony GDM-500PS	1,099.95

LaCie Monitors

LaCie Electron 19 Blue	\$769.95
LaCie Electron 22 Blue	1,399.95

Sony LCD Displays

Sony Multiscan CPD-L 133	\$989.95
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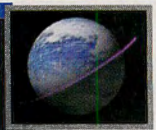
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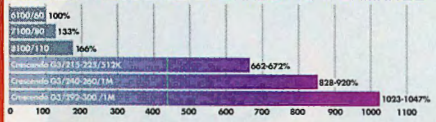


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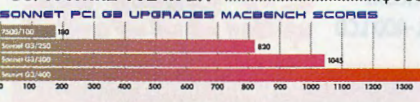


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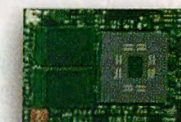
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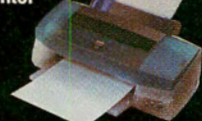
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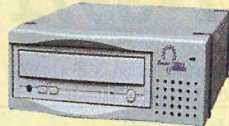
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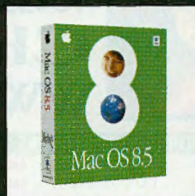
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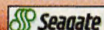
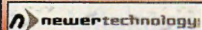
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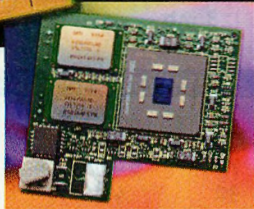
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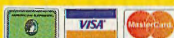
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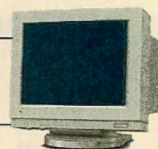
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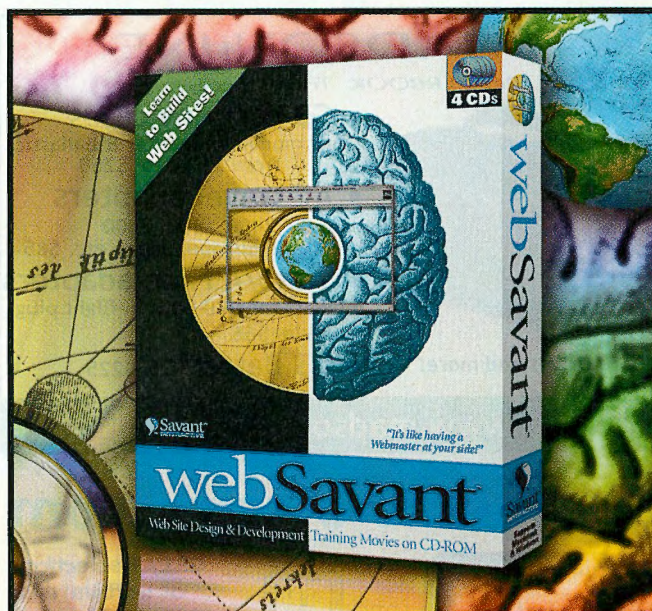
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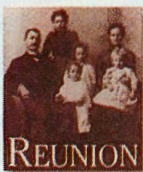
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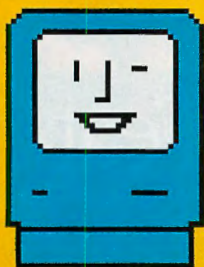
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HIGHER POWER

Remember the last time your multibillion-dollar e-commerce site went up in flames and there was no one to whom you could appeal for help—except that surly IS guy who went off coffee last week? There may soon be another place to turn. The Vatican is thinking over the creation of a patron saint of the Internet. The front-running candidate is Saint Isidore, who wrote a 20-volume encyclopedia back in the sixth century. No word yet on whether there will be a patron saint of dropped PPP connections.

A Match Made in Heaven

"We're happy about the law, but don't think it will actually stamp out piracy in Lebanon, where nothing is really illegal," said a major Microsoft distributor in Beirut after the passage of an anti-piracy law in Lebanon. Microsoft officials were reportedly ecstatic over the lack of legality, and were considering plans to move to Lebanon, give the U.S. Justice Department a big raspberry, and start manufacturing weasel rockets—once banned by the Geneva Convention—to use against competitors.

PROPRIETARY ERROR PROTOCOL

Giving in to the pressure of common sense and Web conduct, Netscape has announced that it will give up some proprietary implementations of Web standards to follow W3C (World Wide Web Consortium) standards. While the company is looking forward to rebuilding its Web browser to conform to Web standards, Netscape refuses to give up on one proprietary implementation—the Type 11 error standard. The company also refuses to release the Type 11 source code.

Long coveted in the Mac community, Netscape's Proprietary Error Protocol (or PEP) is thought to be the most efficient way of causing Type 11 errors. With more recent releases of the Mac OS, the Type 11 error is becoming virtually extinct, and engineers are scrambling madly for anything they can get to re-create the error. Some have even gone so far as to pore through released Navigator source code for hints as to how PEP works.

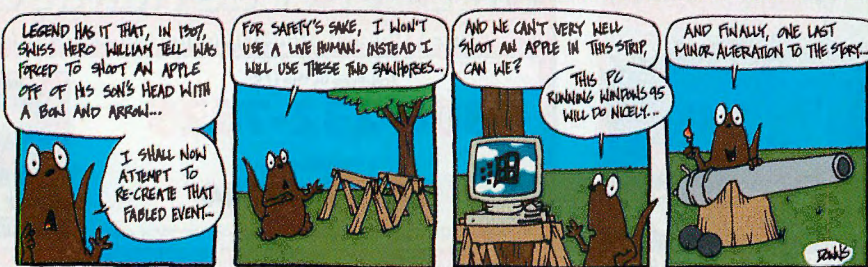
Ads + Bios = Cash

Phoenix Technologies of San Jose, California—the company that supplies more than half the startup code built into PC chips—has announced plans to allow Internet companies to offer their services through ads or other software built into the startup program. This would allow companies to put their software on the PC desktop without making a deal with either Microsoft or PC manufacturers. America Online, CNET, and Excite@Home have signed on to the plan, agreeing to give Phoenix Technologies a share of the revenue that comes from customers acquired through these offers.

Always eager for a new revenue source, PC peripheral makers were dashing to come up with other places to insert ads during the PC-using experience, including the time during file copies, application launches, and when connecting via modem. In an effort to bring a sense of full circle to the effort, an undisclosed marketing company is asking for the rights to ad space during crashes. "We're anxiously awaiting the day when the PC experience is just one giant ad," a spokesman for the company said. "I mean, when you crash, there's not much to do but stare at the screen in shock, and that's the time when PC users are most vulnerable to suggestion. We plan on starting with disk utility ads, but then moving into ads about buying yachts and small islands. We think this sort of thing will be really powerful."

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